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The Iraqi Oil "Weapon" in the 1991 Gulf War:
An International Law Analysis

by

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I. Introduction

On the second of August, 1990, Iraq invaded Kuwait, setting off a chain of international events culminating in the United Nations sanctioned attack upon Iraq by a number of nations led by the United States. The purpose of this paper is to consider one aspect of that armed conflict: the Iraqi release of oil at the Sea Island Terminal and the igniting of the Kuwaiti oil wells under both international environmental law and the international law of armed conflict. Relevant sources from both these fields of international law will be reviewed and an attempt then made to apply them to the Iraqi oil "weapon".¹

The basic thesis of this paper is that the Iraqi oil weapon did violate certain portions of both fields of international law, although not in the expansive manner that some international lawyers have asserted. Specifically, the oil weapon violated Iraq's duties as a party to the Kuwait Regional Convention, and the general international law principle of non-interference. Iraq also violated customary international law as evidenced by the Hague IV Regulations. It also failed to carry out its duties as a party to the 1949 Geneva Conventions. Options for enforcing the applicable law are then reviewed, including a discussion of the historic

¹. For the sake of convenient reference, both the oil release and the oil fires will be referred to as "weapons". The quotation marks are used to denote the conclusion later in this paper that neither constitute legitimate weapons under the law of armed conflict.

reparations mechanism developed by the United Nations Security Council. This paper concludes with an appraisal of the limitations for further developing environmental protections during armed conflicts.¹

A. Factual Background

Following the invasion of the State of Kuwait by Iraqi forces on August 2, 1990, President Saddam Hussein of Iraq threatened to pollute the Persian Gulf with oil² and to set fire to Kuwait's oil wells³ should other nations attempt to liberate Kuwait. Iraq was in effect holding the ecosystem of the Persian Gulf region hostage just as Iraq had previously held citizens of Western nations hostage as "human shields" at Iraqi military facilities. Within a week after the start of the U.S. led coalition air offensive, Iraq began to carry out these threats.

1. The Sea Island Terminal Oil Spill

Three days after the Coalition air offensive commenced against Iraq the first act of sabotage occurred in Kuwait about a dozen miles south of Kuwait City at the Mina al Ahmadi

². Lippman and Booth, Oil Spreading Off Kuwait Poses Ecological Disaster, Wash. Post, Jan. 26, 1991, at A13.

³. Murphy, Iraqis Said to Set Oil Installations Ablaze, Wash. Post, Feb. 23, 1991, at A10.

port facility. Around January 19, 1991, the Iraqis pumped Iraqi crude oil from five tankers located at the port through undersea pipes and out into the Persian Gulf from the Sea Island Terminal.⁴ The terminal was located eight miles off the Kuwaiti coast, and was normally used to load super tankers with oil. The five tankers from which the oil was pumped were said to contain a total of three million barrels of oil.⁵

Besides being connected to the oil tanker piers, Sea Island Terminal was also linked by pipeline to oil storage facilities at Mina al Ahmadi as well as to oil fields further inland. Shortly after emptying the tankers, the Iraqis committed their second act of sabotage and opened up the taps at Sea Island, permitting the oil from the storage tanks and fields to flow directly into the Gulf. While the Sea Island Terminal was reported to have the capability of pumping 100,000 barrels an hour, it was not clear how much was actually being released.⁶ The size of the combined spill was

⁴. Balz, U.S., Allies Press Bombing Against Forces in Kuwait, Wash. Post, Feb. 3, 1991, at A24. (Tests on the resulting oil slick conducted by Saudi Aramco on January 30 confirmed the source of the oil at the southern edge of the slick to be Iraqi oil fields and that the oil had been in the water for at least eleven days. Mr. Jerry Gaines, the economic officer at the U.S. Embassy in Saudi Arabia suggested that these facts were evidence that Iraq intended from the beginning of the war to use oil as a weapon.)

⁵. Atkinson and Hoffman, General Hopeful Torrent Into Gulf Has Been Reduced, Wash. Post, Jan. 28, 1991, at A1.

⁶. Lippman and Booth, supra note 2 at A13. Besides the obvious problem of lack of access to the facility in order to assess the amount spilled, the difficulty involved in quantifying the size of the spill is further

therefore never precisely determined, though it was eventually estimated at between 500,000 and three million barrels of oil.⁷

Despite having threatened to spill oil in the Gulf, Iraq initially denied actually doing so, and instead blamed the

multiplied by contradictory accounts in the press. While the Washington Post reported the Pentagon as saying the five tankers contained three million barrels of oil, Newsweek reported this quantity as three million gallons of oil. Similarly, while the Washington Post reported the pumping capacity of Sea Island Terminal as 100,000 barrels an hour, Newsweek reported it as 100,000 barrels a day. See Begley, etc., Saddam's Ecoterror, Newsweek, Feb. 4, 1991, at 36.

⁷ After the U.S. cut off the source of the spill, Saudi officials estimated the slick contained up to eleven million barrels of oil and measured some 60 miles long and 20 miles wide. See Atkinson and Hoffman, Bush Asks U.S. to Bear 'Burden of Leadership': Superpowers Tell Iraq It Can End War In Gulf, Wash. Post, Jan. 30, 1991 at A24.

That estimate would have made the spill the largest in history, eclipsing Mexico's Ixtoc offshore well spill of 4.3 million barrels and the U.S.'s Exxon Valdez spill of 260,000 barrels. The eventual Saudi Government reassessment downward suggested that the Sea Island Terminal spill was roughly two to twelve times the size of the Exxon Valdez spill. American oil experts were surprised and perplexed by the subsequent Saudi figures. See Atkinson and Devroy, Soviet Proposal Falls Well Short, Bush Says, Wash. Post, Feb. 20, 1991 at A1.

The revision could indicate that the Saudi estimates were being manipulated for political purposes. An unnamed senior diplomat was reported as saying that the Saudis may have minimized the estimates out of concern that they were unable to fund clean-up efforts. See Branigan, War Hampers Effort to Clean Up Huge Gulf Oil Spill, Wash. Post, Feb. 17, 1991 at A41.

The revision may also indicate an intentional inflation of the initial estimates by Coalition nations in order to more starkly portray Saddam Hussein as an "eco-terrorist". See Wheelright, My Turn: Muzzling Science, Newsweek, Apr. 22, 1991 at 10.

Americans for the spill in a complaint to the United Nations.⁸

In a later interview, President Saddam Hussein neither admitted nor denied that this oil spill had been deliberate. However, he did claim that his field commanders would be justified in using oil as a technique of self-defense in fighting the United States.⁹

⁸. Iraq charged that the spill was caused when U.S. aircraft bombed two Iraqi oil tankers on January 22. Atkinson and Balz, Iraq Dumping Flood of Oil into Gulf. U.S. Says: More Scud Missiles Strike Israel, Saudi Arabia, Wash. Post, Jan. 26, 1991, at A1.

While U.S. officials acknowledged this attack took place, they claimed that only a small slick of refined petroleum resulted from damaging the tankers. The subsequent size and location of the slick seemed to bear out the American claim.

Nonetheless, there were in fact numerous sources of oil pollution in the Gulf during the war, though only the Sea Island Terminal spill was intentional. For example, a leak occurred from the Mina al Bakr oil terminal located in Iraq at the north end of the Gulf. Although the Coalition closely studied the terminal for signs of an intentional release, the terminal's location near the site of the U.S. air attack on the Iraqi tankers made it possible that the release was the result of collateral damage caused in the attack. See Atkinson and Gellman, Iraq Trying to Shelter Jets in Iran, Wash. Post, Jan. 29, 1991, at A13.

At the same time, there were reports of oil pollution coming from several other sources, including a tank farm in Khafji, Saudi Arabia and a leaking wellhead at the Kafji oil fields. See Branigan, supra note 7 at A1.

A month after the Sea Island Terminal spill, the Saudi Environmental Agency estimated that twenty to thirty percent of oil spillage in the Gulf had resulted from attacks by Coalition forces on land and naval targets along the Kuwaiti coast. See Atkinson and Devroy, supra note 7 at A1.

⁹. Arnett, Account of Saddam Interview, Wash. Post, Jan. 29, 1991, at A10.

The actual intent of the Iraqis with regard to the Sea Island Terminal spill became clear as the slick from the terminal grew larger each day. The Iraqis, who of course controlled the Mina al Ahmadi port facility and the connected Sea Island Terminal, took no action to stop the flow.

Although the slick was accidentally set on fire

Whatever the precise size of the Sea Island Terminal spill, environmentalists were in agreement that it was among the largest ever and ranked as a major ecological disaster.¹⁰ Prior to the start of the war, the Gulf had supported a vigorous and relatively healthy ecosystem despite having been the most oil-polluted body of water in the world.¹¹ The Sea Island Terminal spill will probably change that. The multi-million dollar Saudi Arabian shrimp and fishing industry was apparently wiped out by the spill.¹² Coral reefs and rare mangrove stands, sea grass beds, sea turtles and marine mammals as well as a large number of migratory birds have been

January 25 during an engagement between U.S. and Iraqi naval forces, it continued to grow rapidly. Atkinson and Hoffman, supra note 4 at A1.

On its own initiative, the U.S. was able to end the release of the oil from the Sea Island Terminal by severing the petroleum pipeline complexes feeding the Terminal in a precision bombing air attack on January 27. Thus, far from being the cause of the large spill, the U.S. was actually responsible for quickly ending the release.

¹⁰. The impact of the spill was significantly magnified by the fact that the Persian Gulf ecosystem is among the most fragile in the world. The Gulf is both relatively shallow (an average of 110 feet deep) and closed (it is flushed only by exchanging waters with the Indian Ocean). Because of this it takes the Gulf 200 years to complete a single flushing cycle. By contrast, the Exxon Valdez spill occurred in Prince William Sound, which flushes completely every few days. Begley, etc., supra note 6, at 38.

¹¹. Id., at 38. (At the cornerstone of that ecosystem are rich sea grass beds, which will be contaminated by the tarry mass of sinking oil. The beds contain nurseries for shrimp, oysters and fish.)

¹². Lippman, Gulf War Leaves Environment Severely Wounded, Wash. Post, Mar. 2, 1991, at A1.

extensively injured.¹³ A number of wildlife were also threatened. Seven thousand rare dugong live in the Gulf.¹⁴ Also living in the Gulf and already listed as endangered species are the Green and Hawksbill sea turtles. Birds have been the most visible of nature's victims, with thousands believed to have died. The diving species were particularly hard hit.¹⁵

2. The Destruction of Kuwaiti Oil Wells and Facilities

Like the release of oil in the Gulf, the torching of Kuwaiti oil wells and destruction of oil facilities had been preceded by repeated threats from Iraqi President Saddam Hussein to blow them up if his forces in Kuwait were attacked. Shortly after the August invasion, Iraqi Army engineers

¹³. Weisskopf, Oil Fire Pollution Assessed, Wash. Post, Apr. 4, 1991 at A25.

¹⁴. Branigan, supra note 7.

Sometimes known as a sea cow, the dugong is related to Florida's manatee. The dugong is a large aquatic mammal which averages 10 to 13 feet in length. A herbivore, the dugong tends to live in groups and is totally aquatic but requires frequent brief visits to the surface in order to breath. See G. Bertram and C. Bertram, Sirenia (dugong, manatees), The New Encyclopaedia Britannica, Macropaedia (1989).

¹⁵. Branigan, supra note 7 at A41. (Most significant among the diving species were the common and Socotra cormorant and the black-necked and great crested grebe. Several million migratory birds also winter in the Gulf beginning in late February. When birds come in contact with oil, they lose their buoyancy as well as their insulation from cold weather. As they attempt to remove the oil by preening, they ingest tar balls of oil, feathers and sand in the process.)

prepared to make good on the threat by systematically planting mines and explosives at most Kuwaiti oil wells, storage tanks, tanker-loading facilities and refineries.¹⁶

The first Iraqi sabotage to the oil wells also coincided with the opening of the spigots at Sea Island Terminal and the commencement of the coalition air campaign (beginning on January 16, 1991). On that occasion, the Iraqis set fire to dozens of wells in the Wafra field in southern Kuwait.¹⁷ At about the same time, Iraqi Army corps commanders received orders from Baghdad to destroy the remaining Kuwaiti oil fields in the event of a ground war.¹⁸

Then, around February 20, 1991, with the ground war still several days away, Baghdad ordered the rest of Kuwait's 1,080 high pressure wellheads and its oil facilities destroyed. By Sunday, 24 February, when the ground offensive commenced, Iraq had already set ablaze 500 of the wells.¹⁹ By the time the coalition had routed the Iraqis from Kuwait, the Iraqis had succeeded in creating damage of tremendous proportions: more than 800 wellheads were rendered inoperable, including 535 set ablaze; about half of Kuwait's 26 petroleum gathering centers

¹⁶. Schwartz, etc., Blasting Down to the Wire, Newsweek, Mar. 4, 1991, at 38.

¹⁷. Begley and Hager, Will Sabotage Cancel Springtime?, Newsweek, Feb. 4, 1991, at 39.

¹⁸. Atkinson and Claiborne, Allies Surround Republican Guard, Say Crippled Iraq Is Near Defeat, Wash. Post, Feb. 27, 1991, at A1.

¹⁹. Schwartz, etc., supra note 16.

were damaged; all of its surface oil-storage facilities were destroyed; all booster stations along the vast Kuwaiti oil-pipeline network were destroyed; \$80 million in spare parts for oil producing equipment and oil industry support facilities were damaged or destroyed; and some damage to oil refineries was sustained.²⁰

While the costs²¹ imposed by the Iraqi sabotage to the oil wells and facilities were huge, the environmental damage had a similar potential. Unlike the damage from the Sea Island Terminal spill, which was centered on fish and wildlife, the oil fire damage is expected to more directly impact human health.²² To date, brisk winds have carried the

²⁰. Claiborne, Kuwaitis Lift Estimates of Oil Damage, Wash. Post, Mar. 6, 1991, at A1. (The Iraqis had actually set demolition charges at nearly every oil well, but some had failed to detonate.)

²¹. Id., at A1. (Huge costs will be involved in replacing the facilities and in putting out the 535 oil well fires. In addition, preliminary estimates were that the fires were consuming six million barrels of oil per day. With a market price of \$20 a barrel, this meant a loss of \$120 million a day in revenue. Estimates on how long it would take to put out the fires varied from six months to five years.)

²². Data collected in Kuwait during the summer of 1991 indicated the presence of PM-10 pollution at levels four to ten times the levels present in the Los Angeles air basin. PM-10 is the scientific term used to describe air particles less than 10 microns in size. The danger to human health from such particles lies in their ability to enter the lung through the normal breathing process. PM-10 particulates can trigger asthma attacks and cause immediate harm to people with other respiratory problems. They are also dangerous on a long-term basis to the general population as a whole, since they act as carriers of other chemical pollutants into the lung such as polycyclic aromatic hydrocarbons, some of which can cause cancer. See Parrish, The Spoils of War: A Report on the Eco-Disaster in the Persian Gulf, L.A. Times, June 23, 1991, at

air pollutants away, preventing significant short-term illness to people in the area. Still, local residents and U.S. troops in Kuwait City have complained of headaches and eye irritation. A study by the U.S. E.P.A. showed that for brief periods, particularly in the vicinity of the fires, pollution levels exceeded U.S. air quality standards over 400 times.²³ Health risks could increase dramatically with the onset of the temperature inversions which occur in Kuwait during the summer months. An inversion can trap the toxic gases from the wells, causing a dangerous smog that could kill people and animals.²⁴

A second pollution problem related to the high sulfur dioxide emissions from the oil well fires is acid rain and sulfates. The sulfur dioxide released into the atmosphere can return to the ground either combined with water vapor to form sulfuric acid or be deposited as sulfates. Winds have carried these emissions from the Kuwaiti oil wells as far east as India. The deposited sulfur-laden rain and particles damage plants (including crops), forests and soil resources.²⁵

Thirdly, the burning oil releases particulates which absorb or adsorb other cancer-causing compounds. The

Magazine, p. 16.

²³. Weisskopf, supra note 13 at A25.

²⁴. Leerhsen, etc., Hellfighters to the Rescue, Newsweek, Mar. 25, 1991 at 30.

²⁵. Claiborne, supra note 20. See also R. Dasmann, Conservation of Natural Resources, The New Encyclopaedia Britannica, Macropaedia, (1989).

particulates then enter the body through the air, water or food.²⁶ The cancer threat normally takes years of exposure to become significant. The long-term threat to countries in the region in this regard will largely turn on the extent of water and food contamination.²⁷

More speculative, was the fear of damage on a global scale from the impact the soot produced might have on climate over a six to twelve month period. If soot rises high enough, it could alter the way the sun's energy is absorbed.²⁸ Fortunately, so far the smoke from the oil fires has remained below the cloud cover where it is less likely to block the sun.²⁹

Part One: International Environmental Law Analysis

International environmental law draws from all the sources traditionally cited by commentators as providing rules

²⁶. Weisskopf, supra note 13 at A26. See also A. Reitze, The Health Effects of Air Pollution (1991).

²⁷. Lippman, supra note 12 at A11.

²⁸. Begley and Hager, supra note 17. (Normally, the ground soaks up heat and creates warm air which in turn rises and creates turbulence which drives the weather. But should the soot rise three to five miles up, it could absorb the solar energy instead, stifling atmospheric circulation. With less solar energy reaching the ground, temperatures would cool and that could result in an interruption of the summer monsoon season in Asia, on which many people depend for food production. It could also bring frost in spring, killing crops elsewhere.)

²⁹. Leerhsen, etc., supra note 24.

of public international law. As laid out in Article 38 of the Statute of the International Court of Justice, these sources are international conventions, international custom and the general principles of law.³⁰ This paper will analyze the Terminal Island oil spill and the oil well fires by first considering the relevant portions of each of these sources related to international environmental law. As will be developed, only conventional law provides a binding rule under which the Iraqi conduct can be considered illegal.

II. Relevant Conventional International Environmental Law

A. Trans-Boundary Air Pollution

The spewing of one to two million tons of carbon dioxide as well as other as of yet undefined pollutants daily into the air from the oil fires set by the Iraqis³¹ obviously raises the issue of whether there are international conventions which regulate trans-boundary air pollution. Yet

³⁰. Statute of the International Court of Justice, Art. 38, para. 1(b).

While Art. 38 also includes "judicial decisions" and "the teachings of highly qualified publicists", these are to be "subsidiary means for the determination of rules of law". As such, most commentators view this last category as not a source of law but only as evidence that a given norm has become a legally binding rule of general application. See I. Brownlie, Principles of Public International Law 1-4 (3d. ed. 1979).

³¹. Booth, Fires Not a Threat to Global Climate, Federal Study Finds, Wash. Post, June 25, 1991 at A3.

little agreement, to date, has been achieved through multi-lateral treaties regarding the control of this pollutant. Emphasis has so far been largely limited to exchanging information, conducting research and agreeing to consult concerning the problem.³² There were therefore no global treaties either open for signature or in force in 1991 which applied directly to the air pollution resulting from the Kuwaiti oil well fires.³³

B. Marine Pollution

Iraq has been noticeably absent from the large list of coastal and maritime nations which have joined in conventions seeking to limit marine pollution caused by discharging and dumping oil from vessels and platforms. Since after World War I, an increasing number of nations have been engaged in a periodic dialogue to develop treaties limiting oil discharge

³². See Convention on Long-Range Trans-boundary Air Pollution, Nov. 13, 1979, 18 I.L.M. 1442 reprinted in International Environmental Reporter Reference File 21:3001. (This essentially European regional agreement entered into force in 1983 with 32 countries presently party to it. Two protocols to the Convention were concluded in 1985. The protocols commit the parties to reducing sulfur dioxide and nitrogen emissions. Sponsored by the UN Economic Commission for Europe, the Convention and its protocols have only been signed by North American and European industrialized nations.)

³³. Air pollution is nonetheless a significant contributor to marine pollution. As will be discussed in the next section, this link has been the subject of a treaty relevant to the Iraqi oil "weapon".)

from vessels.³⁴ This dialogue has resulted in four treaties in which the parties agreed to standards for limiting oil pollution from vessels and platforms: the OILPOL Convention (1954)³⁵, the London Dumping Convention (1972)³⁶, the MARPOL

³⁴. J. Kindt, 1 Marine Pollution and the Law of the Sea 256 (1986).

The U.S. and later the League of Nations initiated this effort, with the first attempt culminating in a 1926 international conference at which a draft agreement was produced but subsequently never ratified.

³⁵. International Convention for the Prevention of Pollution of the Sea by Oil, 1954, 12 U.S.T. 2989, T.I.A.S. 4900, 327 U.N.T.S. 3; Amendments: Mar. 11, 1962, 17 U.S.T. 1523, T.I.A.S. 6109, 600 U.N.T.S. 332; Oct. 21, 1969, 29 U.S.T. 1205, T.I.A.S. 8505 [Hereinafter OILPOL].

OILPOL prohibits the discharge of oil in certain coastal areas by most classes of larger ships, including oil tankers over 150 tons. Under the 1954 version, oil discharge was prohibited within certain designated zones, covering most but not all coastal areas out to 50 nautical miles. These zones included the sea area off the Kuwaiti coast. OILPOL, Annex A.

Subsequent amendments in 1962 and 1969 expanded the prohibited zones, eventually applying the oil discharge restrictions contained in the 1954 treaty to all ocean areas. Goldie, International Maritime Environmental Law Today, in Who Protects the Oceans? 80 (J.L. Hargrove, ed. 1975).

While the Convention does contain provisions permitting discharge of small amounts of oil from machinery space bilges and de-ballasting (Art. III(c)), it otherwise prohibits any discharge or escape of oil from oil tankers either intentionally, accidentally or through routine operations. Art. I(1).

Since approximately 90% of all oil discharged into the oceans from vessels comes from deliberate acts such as de-ballasting and tank washing, these were the activities primarily affected by OILPOL. See C. Okidi, Regional Control of Ocean Pollution: Legal and Institutional Problems and Prospects 29 (1978).

OILPOL entered into force in 1958, and by 1990, 69 nations had become parties to at least the basic treaty. As noted, Iraq is not a party to OILPOL.

³⁶. 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 26 U.S.T. 2403, T.I.A.S. 8165, 11 I.L.M. 1294 [Hereinafter London Dumping

Convention (1973)³⁷, and the MARPOL Protocol (1978).³⁸

Convention].

The London Dumping Convention advanced international efforts to control marine pollution by expanding the types of pollution from vessels to be regulated. The convention limits the deliberate dumping at sea of wastes and other matter by vessels, aircraft or platforms when these wastes and other matter are being transported by or to the vessels, aircraft or platforms for the purpose of disposal. The Convention therefore does not seek to limit any disposal at sea of wastes or other matter that is incidental or derived from the normal operations of a vessel, aircraft or platform. Art. III(1).

The Convention requires parties to prohibit such dumping in all marine waters except internal waters. Art. III(3).

The Convention also categorizes wastes and matter, permitting the dumping of certain types pollutants through a permit system, while placing an absolute prohibition on the dumping of others. Among the substances on which there is a total ban is crude oil. Art. IV(1)(a) and Annex I(5).

The London Dumping Convention entered into force in 1975, and by 1990, 64 nations had become parties to it. Iraq was not a party to the Convention.

³⁷ International Convention for the Prevention of Pollution From Ships, Nov. 2, 1973, I.M.C.O. Doc. MP/CONF/WP.35 (Nov. 2, 1973) reprinted in 12 I.L.M. 1319 [Hereinafter MARPOL].

The MARPOL Convention sought to expand the restrictions on vessel-source pollution (including pollution incidental to normal operations) initiated by the OILPOL Convention. Specifically, restrictions are applied to platforms as well as vessels, and cover not only petroleum in any form but also a long enumerated list of certain "noxious liquid substances in bulk". Art. 2(4), Annex I (Reg.1(1) and 9), Annex II (App.2).

Parties are invited but not required to also adopt additional restrictions on certain other enumerated pollutants contained in three additional Annexes. Annexes III-V.

Annex I sets out regulations for the prevention of pollution by oil. While this Annex contains provisions on ship design, required inspections, shore oil reception facilities and required records, most pertinent to this paper are the restrictions on discharge of oil overboard by oil tankers. It prohibits the discharge of any oil from tankers within either 12 or 50 nautical miles of land (depending on vessel size), or when located within special areas. Annex I(Reg.9(1)). The "special areas" are semi-enclosed seas where pollution is a particular problem and specifically include the Persian Gulf. Annex I (Reg. 10(1)(e)).

Since Iraq is not a party to any of these conventions, further discussion of them will be deferred to considering their value as evidencing customary law in the next section.

In 1979, Iraq did, however, break with its history of non-participation to become a party to a convention placing limits on maritime oil pollution with the Gulf. This convention clearly established Iraqi liability for violating international environmental law.

Because of technical problems related to Annex II and reluctance by maritime states in adopting certain inspection and oil tanker design requirements contained in Annex I, only three states have ratified the MARPOL Convention. It has therefore not entered into force in its unamended version. See M. Bowman and D. Harris, Multilateral Treaties- Index and Current Status 158 (Supp. 1990).

³⁸ Protocol of 1978 Relating to the International Convention for the Prevention of Pollution From Ships, T.I.A.S. 10009, reprinted in International Environment Reporter Reference File, 21:2381.

The MARPOL Protocol deferred application of Annex II of the basic Convention and also made some modifications to the Annex I inspection and oil tanker design requirements. Significantly, the oil discharge restrictions contained in Annex I and pertinent to this paper were left unchanged. See MARPOL Protocol Annex. (No change to Regulation 9.)

Ratification of the MARPOL Protocol results in automatic acceptance of the MARPOL Convention as modified. Art. I(b).

For those nations which had previously become parties to OILPOL but which subsequently became parties to either MARPOL or the 1978 Protocol, OILPOL is superseded. See MARPOL Convention, supra note 37, Art. 9(1).

As amended by the MARPOL Protocol, the MARPOL Convention (including Annex I) entered into force in 1983 and as of 1990, 57 nations had become parties to it. Iraq was not a party to either MARPOL or the 1978 Protocol.

1. Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution³⁹

The Kuwait Regional Convention entered into force in 1979, and all eight coastal nations of the Persian Gulf including Iraq have signed it. It was developed through the United Nations Environment Program Regional Seas Program, which had recognized the Persian Gulf as a "concentrated area" requiring special attention to control pollution. The geographical coverage of the Convention includes the entire Gulf.⁴⁰ Central to the issue of the illegality of the Iraqi Sea Island Terminal spill and oil well fires are the articles which commit the parties to taking "all appropriate measures to prevent, abate and combat pollution in the (Persian Gulf) caused by: ... dumping of wastes and other matter from ships and aircraft⁴¹...; ... intentional or accidental discharges from ships⁴²..."; and "...discharges from land reaching the (Persian Gulf) whether water-borne, air-borne, or directly from the Coast including out-falls and pipelines...".⁴³

³⁹. Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution, Apr. 24, 1978, 1140 U.N.T.S. 133 [Hereinafter Kuwait Regional Convention].

⁴⁰. Id., Art. II. See also Amin, Cleaning Up Pollution and Wrecks in the Gulf, Vol. 30 No. 10 Middle East Executive Reports 21 (1988).

⁴¹. Kuwait Regional Convention, supra note 39 at Art. V.

⁴². Id. at Art. IV.

⁴³. Id. at Art. VI.

The pumping of oil from the five tankers at Mina al Ahmadi into the Persian Gulf through Sea Island Terminal plainly violated Iraq's duty to prevent pollution of the Gulf from intentional discharge and dumping from ships. Iraq breached its duty to prevent pollution from land from reaching the Gulf when it released crude oil from storage facilities and oil fields through Sea Island Terminal. Finally, the Iraqi sabotage of Kuwait's oil wells, resulting in 535 oil well fires, violated its duty to prevent air-borne discharges of pollutants from reaching the Gulf. In this regard, as Article VI recognized, air pollution is a significant contributor to pollution in water.⁴⁴

The parties are also committed to ensuring compliance in the Gulf with "applicable international rules" relating to control of discharges of pollution from ships and the dumping of wastes from ships and aircraft.⁴⁵ This reference to "applicable international rules" is further clarified in the Action Plan which was concluded by the parties during the same month as the Kuwait Regional Convention.⁴⁶ Included within the Plan is an appeal by the Parties for each to ratify and

⁴⁴. Shabecoff, Acid Rain Called Peril to Sea Life on Atlantic Coast, N.Y. Times, Apr. 24, 1988 at 6.

⁴⁵. Kuwait Regional Convention supra note 39 at Art. IV and Art. V.

⁴⁶. Action Plan for the Protection and Development of the Marine Environment and the Coastal Areas of Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates, Apr. 23, 1978, reprinted in International Environment Reporter Reference File, 21:2701.

implement relevant international conventions controlling pollution from ships, particularly OILPOL, MARPOL, and the 1978 MARPOL Protocol.⁴⁷ Thus, while the Convention did not incorporate these treaties, it required the Parties to enforce compliance with the standards within them.

In the event of a dispute among the parties concerning the interpretation or application of the treaty, settlement is first to be sought through negotiation or other peaceful means. If agreement is not reached, the dispute is to be submitted to a Judicial Committee for the Settlement of Disputes.⁴⁸ The Judicial Committee is a part of the organization established to administer the programs by the Convention.⁴⁹

III. The Absence of Relevant Customary International Environmental Law

Since marine pollution has overtime been the most developed field in international environmental law, it is

⁴⁷. Id. at 21:2703, no.25.

⁴⁸. Kuwait Regional Convention, supra note 39 at Art. XXV.

⁴⁹. The Regional Organization for the Protection of the Marine Environment consists of three organs: a Council composed of the parties; a Secretariat; and the Judicial Commission. The composition, terms of reference and rules of procedure of the Judicial Commission was to have been established at the first meeting of the Council. Ironically, the Organization was headquartered in Kuwait, which had taken the lead in proposing the Convention. See Kuwait Regional Convention, supra note 39 at Art. XVI.

worth considering whether any customary law has emerged as a result of the string of agreements signed in the 36-year period preceding the 1991 Persian Gulf War. This section therefore poses two questions for analysis. First, assuming Iraq were a party to any of the four treaties placing restrictions on oil pollution from vessels or platforms (The OILPOL Convention, the London Dumping Convention, the MARPOL Convention and the MARPOL Protocol), would Iraq have violated those restrictions by the oil release at Sea Island Terminal? Second, if so, then do these treaties give rise to rules of customary international law that would bind Iraq nonetheless? As will be developed, the Sea Island Terminal spill can be said to have violated either the vessel-source pollution restrictions in the MARPOL Protocol or the dumping restriction in the London Dumping Convention. However, since neither of these treaties has yet to spawn an international customary norm, they contain no law binding upon Iraq.

A. Are There Oil Pollution Treaty Restrictions Which Would Apply?

1. The OILPOL Convention⁵⁰

The oil released from the man-made Sea Island Terminal platform, located eight miles off the Kuwaiti coast, had two

⁵⁰. Infra note 35.

sources: Five oil tankers berthed in a Kuwaiti port, and oil stored at the port as well as oil fields further inland. Since OILPOL only restricts the discharge of oil from ships (and not oil platforms)⁵¹ application of the OILPOL restrictions would initially be limited to the oil pumped from the five tankers. As to oil tankers, OILPOL (in all its versions) prohibits discharge of oil within specified prohibited zones along certain coastal areas.⁵² Included within the prohibited zones was the sea area off the Kuwaiti coast, including the Sea Island Terminal.⁵³

While OILPOL's prohibition would therefore seem to apply to the act of pumping oil from the tankers out into the Gulf, there are two significant exceptions within the treaty which limit its application. First, OILPOL does not apply to ships used as naval auxiliaries.⁵⁴ These are generally considered to be vessels, other than warships, that are owned by or under the exclusive control of the armed forces of a nation and used only on government non-commercial service.⁵⁵ While details

⁵¹. OILPOL, supra note 35 unamended at Art. II, and in its 1962 and 1969 amended versions at Art. I(1).

⁵². Id. at Art. III. (Some allowance was made for "oily mixture" with a parts per million cap on oil content but that allowance would not apply to undiluted crude oil.)

⁵³. Infra note 35.

⁵⁴. OILPOL, supra note 35 at Art. II.

⁵⁵. Dept. of the Navy, Annotated Supplement to the Commander's Handbook on the Law of Naval Operations 2-4 (1989) [Hereinafter Law of Naval Operations].

concerning the nationality and commercial character of the five tankers are not publicly available, an argument can be made that the tankers fell under the exclusive control of the Iraqi armed forces at the time of the oil release.

Secondly, in case of war or other hostilities, the Convention permits a party to unilaterally suspend the application of the Convention to ships registered within its territory.⁵⁶ This exception is more significant than the first since it signals that the oil pollution restrictions were only optional in an armed conflict. Had Iraq been a party to OILPOL, it could easily have given notice of suspension and avoided any responsibility under the Treaty for the subsequent spill. Given these limitations, OILPOL would not have restricted the Iraqi act in releasing oil at Sea Island Terminal had Iraq been a party to it.

2. The MARPOL Convention as Amended by the MARPOL Protocol⁵⁷

Intended as a successor agreement to OILPOL⁵⁸, the MARPOL Convention, as amended by the MARPOL Protocol, likewise prohibited the discharge of oil into certain marine waters

⁵⁶. OILPOL, supra note 35 at Art. XIX.

⁵⁷. Infra notes 37 and 38.

⁵⁸. Cycon, Calming Troubled Waters: The Developing International Regime to Control Operational Pollution, 13 J. Mar. Law & Com. 35, 41 (1981).

designated as "special areas".⁵⁹ Under the Protocol, all of the Gulf was designated as a "special area" and therefore discharge of oil therein by large ships is prohibited.⁶⁰ Unlike OILPOL, which applied restrictions only to sea-going vessels, the MARPOL Protocol limitations applied to fixed platforms as well.⁶¹ Therefore, all of the oil released at Sea Island Terminal violated the MARPOL Protocol restrictions regardless of whether its source was a tanker or a facility ashore.⁶²

⁵⁹. MARPOL Convention, supra note 37 at Annex I (Regs. 9 & 10).

For oil tankers, the prohibition applies within 50 nautical miles from the nearest land and in other designated "special areas". For ships other than oil tankers and weighing more than 400 tons gross tonnage, the prohibition applies within 12 nautical miles from the nearest land and within the designated "special areas". Since the Convention defines "ship" to include fixed platforms, this latter category presumably applies to platforms as well.

⁶⁰. Id.

⁶¹. Id. at Art. 2(4).

⁶². Article 2 of the MARPOL Convention defines "discharge" to mean any release of harmful substances (elsewhere defined as oil and the other enumerated pollutants) "howsoever caused from a ship". However, Article 2 goes on to exclude from the definition of "discharge" any release constituting dumping under the London Dumping Convention. This suggests that the Sea Island Terminal spill can be a violation of either the MARPOL Protocol or the London Dumping Convention but not both.

The distinction between the two treaties in regard to the Sea Island Terminal spill turns on the purpose of the Iraqis. The London Dumping Convention defines "dumping" as "any deliberate disposal at sea of wastes or other matter." Art. III(1). If the Iraqi purpose in releasing the oil into the Gulf was vengeance, by destroying valuable property of the Kuwaiti state, then Iraq intended to dispose of the oil. However, if the Iraqi purpose was to use the oil as a weapon to ward off an amphibious assault or shut down the Saudi

The argument that the MARPOL Protocol applies to Iraq's oil spill is strengthened by the noticeable absence of a war clause such as had been provided for in OILPOL.⁶³ The omission of a war clause in a treaty designated as a successor to OILPOL is evidence that the parties intended the release restrictions within the MARPOL Protocol to apply in wartime and during hostilities as well as in peacetime.

The Protocol does contain an exemption from the application of its pollution restrictions for naval auxiliaries.⁶⁴ However, the exemption is followed by an agreement that warships and naval auxiliaries must "act in a manner consistent, so far as is reasonable and practicable, with the present Convention."⁶⁵ There is therefore some room for argument that this qualifying language would strip the oil tankers berthed at Mina al Ahmadi of the exemption they might otherwise qualify, even if they were viewed as naval

desalinization plants, then disposal of the oil was not their intent (though still the collateral effect) and hence the MARPOL Protocol rather than the London Dumping Convention would apply.

⁶³. The MARPOL Protocol does provide an exemption from liability for oil discharges resulting from damage to a ship or its equipment provided all reasonable precautions are taken to minimize the discharge and provided that the owner or master acted neither recklessly or with intent to cause damage. MARPOL Convention, supra note 37, Annex I (Reg.11). The terms of this exception would therefore clearly not apply to the Sea Island Terminal release.

⁶⁴. Id. at Art. 3(3).

⁶⁵. Id.

auxiliaries, since the release of the oil into the Gulf was both unreasonable and impractical.⁶⁶ It should also be remembered that the MARPOL Protocol also applies to fixed platforms, for which the naval auxiliary exception would presumably not apply.⁶⁷ The Sea Island Terminal spill would then fall outside the naval auxiliary exception. Had Iraq been a party to the MARPOL Protocol, the oil release at Sea Island Terminal would have violated the prohibition against the discharging of oil by large vessels and fixed platforms in the Gulf (one of the specially designated marine areas).

3. The London Dumping Convention⁶⁸

Included within the provisions of the London Dumping Convention is an absolute prohibition on the disposal of crude oil in marine waters (except internal waters) from vessels and fixed platforms.⁶⁹ Assuming the Iraqi purpose was to

⁶⁶. The practicality of the oil release as a weapon is discussed infra at section VII (E) (2), p. 70.

⁶⁷. It is questionable whether or not the term "naval auxiliary" could be applied to a fixed platform as well as a sea-going vessel. Given the expanded definition of "ship" in the Protocol to include fixed platforms, it perhaps could be argued that "naval auxiliary" also includes such installations if subject to the same defining criteria as ocean-going vessels. Certainly fixed platforms have an extensive history of military use such as sites for radar and anti-aircraft guns.

⁶⁸. Infra note 36.

⁶⁹. Id. at Art. IV(1), Art. VII, Annex I.

vengefully render useless the crude oil released into the Kuwaiti territorial sea from Sea Island Terminal, then the act constituted a "disposal" of the crude oil, which violated the enumerated prohibition in the London Dumping Convention.

Like the MARPOL Protocol, the London Dumping Convention contains no war clause, signalling an intention to apply the prohibition against dumping of crude oil during times of war and hostilities as well as in peacetime. The Convention does provide an exemption for naval auxiliaries under which the tankers at Mina al Ahmadi might qualify.⁷⁰ However, unlike the MARPOL Protocol, the London Dumping Convention defines vessels as a distinct category from fixed platforms.⁷¹ The naval auxiliary exemption could therefore not apply to the Sea Island Terminal. Additionally, as to the Iraqi tankers, the exemption is further qualified by the statement that "...each Party shall ensure by the adoption of appropriate measures that such vessels and aircraft owned and operated by it act in a manner consistent with the object and purpose of this Convention..."⁷² As with the amended MARPOL Convention then, there is some room to argue that even if the tankers

⁷⁰. Article VII(4) states in part: "This Convention shall not apply to those vessels and aircraft entitled to sovereign immunity under international law." Id.

Both warships and naval auxiliaries are entitled to sovereign immunity. See Law of Naval Operations, supra note 55 at 2-4.

⁷¹. London Dumping Convention, supra note 36 at Art. III(2).

⁷². Id. at Art. VII(4).

constituted naval auxiliaries, they were required to act consistently with the prohibition against disposal of oil in the Gulf.

In conclusion, had Iraq been a Party to the London Dumping Convention, the Sea Island Terminal oil release would have violated the Convention's rule against the disposal of crude oil in marine waters outside internal waters of a state by large vessels and fixed platforms.

B. Do These Conventions Contain Rules of Customary International Law?

Since the MARPOL Protocol and the London Dumping Convention contain certain rules of positive international law which would have made the use of Iraq's oil "weapon" illegal, had Iraq been a party to those Conventions, have these rules become customary law and therefore binding upon Iraq despite its non-participation in the treaties?

That it is possible for certain rules in treaties to create norms of customary international law has been recognized explicitly by the International Court of Justice in the North Sea Island Continental Shelf Cases and to a lesser extent in other opinions.⁷³ This is so because a treaty not

⁷³. A. D'Amato, The Concept of Custom in International Law 113-121 (1971).

The Court in the North Sea Continental Shelf Cases considered the contention by Denmark and the Netherlands that Article 6 of the Geneva Continental Shelf Convention had spawned a rule of customary international law as a result of

only creates law which is binding upon the parties to it, but it also has the potential for evidencing the general practice of states in determining whether a given rule of customary international law has developed.⁷⁴ General state practice (also referred to as usage) and opinio juris are the two basic

the signing of the convention as well as from other subsequent state practice. The Court said:

71. In so far as this contention is based on the view that Article 6 of the Convention has had the influence, and has produced the effect, described, it clearly involves treating that Article as a norm-creating provision which has constituted the foundation of, or has generated a rule which, while only conventional or contractual in its origin, has since passed into the general corpus of international law, and is now accepted as such by the opinio juris, so as to have become binding even for countries which have never, and do not, become parties to the Convention. There is no doubt that this process is a perfectly possible one and does from time to time occur: it constitutes indeed one of the recognized methods by which new rules of customary international law may be formed. At the same time this result is not lightly to be regarded as having been attained.

North Sea Continental Shelf Cases, 1969 I.C.J. Rep. 4 at para. 71[Hereinafter N.Sea Cases].

Among the other cases Professor D'Amato cited as evidence that the Court has recognized that customary law could be made in this way was the Nottebohm Case in which the Court relied exclusively on a treaty as evidence of state practice. In addition, he also cited the Court's extensive analysis of several conventions in the Lotus Case. In Lotus, the Court concluded the cited Conventions lacked a relevant customary precedent regarding the immediate issue. But, by conducting such an analysis, it implicitly recognized that treaties have the potential for creating customary international law norms.

⁷⁴. A. D'Amato, supra note 73 at 104. See also I. Brownlie, supra note 30 at 5 and 12.

elements required in the formation of customary international law.⁷⁵

The element of opinio juris requires that the acts constituting a general state practice in the first element must be based upon a belief by the states that such acts are legally required under international law. Motives such as courtesy, fairness or morality may result in a general state practice, but they will not produce customary international law.⁷⁶

The pertinent rules from the MARPOL Protocol and London Dumping Convention will now be examined by considering an expanded analysis of these two basic elements.

1. Treaty Provisions Must Be Norm-Creating

Since only generalized rules within treaties can give rise to a customary norm, an initial consideration is whether the rules proposed have that characteristic.⁷⁷ Not all acts of state, including the act of signing a treaty, have this

⁷⁵. Thus the reference in Article 38 of the Statute of the International Court to "international custom, as evidence of a general practice accepted as law". Statute of the International Court of Justice, supra note 30 at Art. 38(1)(b).

⁷⁶. I. Brownlie, supra note 30 at 8.

⁷⁷. A. D'Amato, supra note 73 at 105-6.

characteristic.⁷⁸ On their face, the rules containing broad prohibitions against discharge or disposal of crude oil in certain marine waters indeed seem to be generalized.⁷⁹

In the North Sea Cases, the World Court considered what was required for a generalized rule and developed one methodology for determining, as it put it, whether a treaty provision had a "fundamentally norm-creating character".⁸⁰ The Court analyzed the structure of the underlying treaty to determine if it manifested an intent to have the cited provisions generalizable into a rule of customary international law while reserving other provisions solely to the treaty.⁸¹ For example, a signatory's ability to opt out of a treaty provision may signal the drafting parties' intent

⁷⁸. Professor D'Amato describes how all acts of state, including treaties, must be weighed as evidence of state practice with this requirement in mind. He asserts that acts involving economic or military aid, trade, establishment of objective regimes such as international waterways, and the creation of international servitudes all fail to create a generalizable rule. He goes on to also exclude from generalizable rules, agreements regarding the functions and competencies of international organizations. Id.

⁷⁹. Besides falling outside of the categories asserted by Professor D'Amato in the previous footnote, the rules cover broad categories of ocean-going vessels and fixed platforms. The marine waters involved are similarly global in scope though not all encompassing.

For waters covered under the MARPOL Protocol, see infra note 37. The London Dumping Convention includes all marine waters except the internal waters of a state. Infra note 36 and the accompanying text.

⁸⁰. N. Sea Cases, supra note 73 at para. 72. See generally Murry, A Discussion of the World Court's North Sea Judgment, 19 Am. U.L. Rev. 470 (1970).

⁸¹. Id. See also A. D'Amato, supra note 73 at 110.

not to generate a norm-creating provision.⁸²

The MARPOL Protocol's crude oil discharge restriction contained within Annex I meets the North Sea Cases' manifest intent test. Unlike the other several prohibitions against discharge of certain pollutants within the Convention, acceptance of the provision prohibiting the discharge of crude oil is not subject to reservation by a state becoming a party to the MARPOL Protocol.⁸³ Additionally, the crude oil restriction allows no exceptions to the obligation to prohibit the discharge of crude oil at the option of states ratifying or acceding to the Convention.⁸⁴

Applying the North Sea Cases' manifest intent test to the London Dumping Convention, the crude oil disposal provision

⁸². N. Sea Cases, supra note 73 at para. 72. (The Court found that the Continental Shelf Treaty's equidistance rule provisions was not norm-creating because parties were permitted to exempt themselves from its application through a reservation.)

⁸³. MARPOL Convention, supra note 37 at Art. 13(1) and Art. 14(1).

⁸⁴. Although there are exceptions for ships discharging crude oil in order to secure the safety of a ship or life at sea and for discharge resulting from damage to a ship or its equipment, these apply equally to all parties and are therefore not optional at the discretion of a given party. See MARPOL Convention, supra note 37 at Annex I (Reg. 11).

Similarly, the naval auxiliary exemption applies to all parties rather than at their individual option. Id. at Art. 3(3).

In North Sea Cases, the Court found that the availability of the optional delimitation mechanism of negotiation and the allowance for deviation from the equidistance method when another boundary line is justified by special circumstances were additional factors depriving the equidistance method of a norm-creating character.

likewise can also be considered to be of a norm-creating character. While the Convention does not prohibit the making of reservations, there is no partial ban on reservations such as was the deciding factor in North Sea Cases.⁸⁵ As with the MARPOL Protocol, the London Dumping Convention also provides no exceptions for the prohibition on disposal of crude oil at the option of individual state parties such as the one which troubled the Court in the North Sea Cases.⁸⁶ In sum, it can be said that the rules prohibiting dumping or discharging of crude oil in certain marine waters by vessels and fixed platforms meet the initial requirement for a customary norm: that it be a generalized rule.

2. How General a Practice?

The World Court has put the burden of proving the

⁸⁵ . The Court noted that the Continental Shelf Convention permitted reservation to the Article containing the equidistance method while prohibiting making reservations to other substantive articles. It then inferred from this arrangement an intent not to create a generalizable rule regarding the equidistance method in delineating the continental shelf. Since it was the mixed reservation provision that the Court found had robbed the pertinent treaty provision of its norm-creating nature, the manifest intent test arguably still permits an inference of generalizable rule making intent on the part of the drafting parties where the treaty is only silent as to reservations. See N. Sea Cases, supra note 73 at para. 64.

⁸⁶ . Similar exceptions for safety and naval auxiliaries provided for in the MARPOL Protocol are also available in the London Dumping Convention. See London Dumping Convention, supra note 36 at Art. V and Art. VII(4).

existence of a custom upon the party seeking to rely upon it and has required that the rule invoked be shown to be in accordance with a constant and uniform usage practiced by the states in question.⁸⁷ But how uniform or general must that practice be? Professor Brownlie states that substantial, though not complete, uniformity is required.⁸⁸ Given that both domestic and international courts regularly declare rules customary based upon thin evidence of usage, it is telling that Professor Brownlie goes on to comment that the question of how general a state practice must be is "very much a matter of appreciation and a tribunal will have considerable freedom of determination in many cases."⁸⁹

In considering when a treaty rule can be said to have become a rule of customary law, the World Court in North Sea Cases said that where a considerable period of time has not passed since the signing or entry into force of the treaty, it is still possible for a customary rule to emerge from it if there was a "very widespread and representative participation in the convention".⁹⁰ Like the Continental Shelf Convention in the North Seas Cases, both the MARPOL Protocol and the

⁸⁷. The Asylum Case, I.C.J. Reports (1950) at 276-7.

⁸⁸. I. Brownlie, supra note 30 at 6. (The Professor cites as support for this assertion the World Court's refusal to accept a ten-mile rule for bays as a rule of customary law in the Fisheries Case.)

⁸⁹. Id.

⁹⁰. North Sea Cases, supra note 73 at para. 73.

London Dumping Convention are relatively recent treaties.⁹¹ Since only about one-third of all states are parties to the MARPOL Protocol and the London Dumping Convention⁹², this number is obviously inadequate to as yet constitute a general practice among states in the view of the World Court.⁹³

3. Considering Relevant State Practice

Since treaties are only one form of state practice, it is necessary when attempting to determine the existence of a given customary norm to also consider what states are actually

⁹¹. As of 1991, it has been 13 years since the MARPOL Protocol had been signed and 8 years since it had been ratified. The London Dumping Convention had been signed 19 years before and had entered into force 16 years before. Similarly, at the time the World Court applied this test to the Geneva Continental Shelf Convention, 10 years had passed since its signing and 5 years since its entry into force.

⁹². A breakdown of these states, including those who have signed both conventions is provided in Annex A.

⁹³. It should be noted that at least the maritime shipping nations were well represented. 14 of the 15 flag states with the largest merchant fleets by deadweight tons had become parties to the MARPOL Protocol and 12 of 15 had become parties to the London Dumping Convention. The only flag state with a large fleet not a party to either convention was Singapore. See U. S. Dept. of Transportation, Maritime Administration, The Annual Report of the Maritime Administration for Fiscal Year 1984, Table 11 at 12.

Viewed another way, in the case of the MARPOL Protocol, these states represent eighty percent of the total world shipping tonnage. See R. Churchill and A. Lowe, The Law of the Sea 252 (1988).

doing in the world.⁹⁴ Treaty ratification or adoption by states is a reasonable predictor of a state's future conduct and therefore relevant in assessing state practice. However, it is also true that a state's actions subsequent to becoming a party to a treaty which amount to a pattern of conduct contrary to the treaty is also relevant in assessing state practice since it may cast doubt upon the value of a state's adherence to a given treaty as a predicting factor.⁹⁵

This is the situation in the case of the MARPOL Protocol. As with its predecessor, the OILPOL Convention, states which have become parties to the Protocol have generally failed to enforce the prohibition against the discharge of crude oil in specified waters.⁹⁶ This lack of enforcement is not so much a question of technical capacity in identifying polluters as it is a lack of political will to follow-up treaty obligations

⁹⁴. Weisbord, Customary International Law: The Problem of Treaties, 21 Vand. J. Transnational L. 2,5,20 (1988).

⁹⁵. Id. at 37.

⁹⁶. R. Churchill and A. Lowe, supra note 93 at 254-5. The authors point out that under the MARPOL Protocol only flag states can enforce pollution standards against a vessel polluting the high seas, which is where most vessel-source pollution occurs. Additionally, flag states have generally failed to meet reporting requirements regarding enforcement actions taken against their own vessels. This helps to undercut political and diplomatic efforts by other parties or the IMO to require enforcement from states identified as not enforcing treaty provisions.

See also J. Kindt supra note 34 at 1173-4.

with action.⁹⁷ As such, this is further evidence that the prohibition against discharge of crude oil contained in the MARPOL Protocol does not yet constitute a general practice among states.

4. The Element of Opinio Juris

Professor Weisburd has persuasively argued that for the element of opinio juris to be satisfied with regard to a given rule, states must believe not only that they are legally obliged to obey the rule but also that their failure to do so will result in their incurring legal obligations.⁹⁸ This would specifically involve both the right of another affected state to question its conduct and the duty to correct the breach of its obligation through some form of reparation.⁹⁹ Therefore, in order for a treaty to evidence the necessary opinio juris with regard to a given customary norm, the treaty must include provisions under which each party acknowledges the right of other parties to inquire concerning possible breaches and to receive reparations when affected by the

⁹⁷. It has been possible since the early 1980's to in effect "finger print" the cargo of each tanker through the use of a gas chromatograph. Since each batch of crude oil has a unique chemical compound, a sample from an oil slick found in marine waters or washed ashore on a beach can be traced back to a particular ship and made the basis of an enforcement action. See J. Kindt, supra note 34 at 742-3.

⁹⁸. Weisburd, supra note 94 at 7-10.

⁹⁹. Id.

breach of duty under the treaty.¹⁰⁰

To a remarkable extent, the MARPOL Protocol evidences the legal obligations discussed and can therefore be said to satisfy the opinio juris element. Disputes regarding the interpretation or application of the Convention may be settled through negotiation between the affected states, but an aggrieved party always retains the right to force an arbitration of the dispute upon the offending party.¹⁰¹ Although each party to the arbitration may appoint a member to the three person arbitration tribunal, the Protocol specifies that failure to make such an appointment within sixty days will cause the seat to be filled by someone appointed by the IMO instead.¹⁰² This procedure therefore avoids a deadlock over the appointment of a suitable arbitration panel. The Protocol also contains provisions specifying a five-month time limit for rendering a decision and for the finality of the arbitration award.¹⁰³ The parties are also required to immediately comply with the award.¹⁰⁴

In contrast, the London Dumping Convention limply provides that the parties are to later consider procedures for

¹⁰⁰. Id. at 23.

¹⁰¹. MARPOL Convention, supra note 37 at Art. 10.

¹⁰². Id. at Protocol II, Art. III & IV. (One of the three members of the panel is always appointed by the IMO.)

¹⁰³. Id. at Protocol II, Art. X.

¹⁰⁴. Id.

the settlement of disputes concerning the interpretation and application of the Convention.¹⁰⁵ An amendment providing for the referral of disputes to either the World Court or to an arbitration panel similar to that under the MARPOL Protocol was proposed in 1978 but still has not garnered much support.¹⁰⁶ The Convention also calls for the parties to agree on procedures for assessing liability and settling disputes regarding dumping.¹⁰⁷ No such procedures have been developed.¹⁰⁸ The continued reluctance of the parties to provide a meaningful mechanism for enforcing legal rights under the London Dumping Convention deprives this Convention of the critical element of opinio juris necessary in order for it to spawn a customary rule of international law.

5. Conclusions Regarding Marine Pollution Conventions Evidencing Customary International Law

Under international law, restrictions upon the independence of states cannot be presumed.¹⁰⁹ The World

¹⁰⁵. London Dumping Convention, supra note 36 at Art. XI.

¹⁰⁶. Text in 18 I.L.M. 517 (1979).

As of 1990, only 13 of the necessary 42 acceptances needed for its entry into force had been made.

¹⁰⁷. London Dumping Convention, supra note 36 at Art. X.

¹⁰⁸. R. Churchill and A. Lowe, supra note 93 at 270.

¹⁰⁹. S.S. "Lotus" (France v. Turkey), 1927 P.C.I.J. (ser. A) No.9 (Sept. 7) at 18.

Court's decision in the North Sea Cases signaled its continued reluctance to permit the development of international law through a liberal application of the customary law mechanism.¹¹⁰ This conservatism is well-founded, since, as Professor Weisburd has pointed out, it makes no sense "to label as international law rules that many states will not obey and that very few states are willing to enforce against violators".¹¹¹ While the MARPOL Protocol and London Dumping Convention are noteworthy advancements of international environmental law for the parties to them, they cannot yet be said to contain rules of customary law binding upon non-party states such as Iraq.

IV. Still Emerging Customary International Law

A. The United Nations Convention on the Law of the Sea¹¹²

1. Introduction

After 14 years of negotiation among 150 nations, the Jamaica Convention was opened for signature in 1982.

¹¹⁰. L. Nelson, The North Sea Continental Shelf Cases and Law-Making Conventions, 35 Mod. L. Rev. 52, 56 (1972).

¹¹¹. Weisburd, supra note 94 at 45.

¹¹². United Nations Convention on the Law of the Sea, Dec. 10, 1982, U.N. Doc. A/Conf. 62/122, 21 I.L.M. 1261 [Hereinafter Jamaica Convention].

Encompassing a wide variety of legal issues regarding the world's ocean areas, the Convention includes a part consisting of 45 articles devoted to the protection and preservation of the marine environment. As of October, 1991, 50 states including Iraq have become parties to the Convention. However, the Convention will not enter into force until twelve months after the 60th nation becomes a party to it.¹¹³

2. Provisions

The Jamaica Convention's environmental provisions establish a general framework of powers and duties that states have with regard to the marine environment. Most significant about these provisions is a new emphasis on each party's duty to protect the marine environment, while de-emphasizing the traditional powers of the sovereign state.¹¹⁴ Parties have the general duty to take measures necessary to prevent pollution of the marine environment from any source.¹¹⁵ In so doing, each party is committed to use the best practical means at its disposal in accordance with its capabilities.¹¹⁶ The Convention also makes clear that the duty to prevent

¹¹³. Id. at Art. 308(1).

¹¹⁴. Boyle, Marine Pollution Under the Law of the Sea Convention, 79 A.J.I.L. 347 (1985) at 350.

¹¹⁵. Jamaica Convention, supra note 112 at Art. 194.

¹¹⁶. Id.

marine pollution extends to all sources of pollution explicitly including intentional discharge of pollution from vessels and installations operating in the marine environment.¹¹⁷

3. Application to the Iraqi Oil "Weapon"

The language of the Convention suggests that in enacting national legislation to protect the marine environment, states will be held to different standards depending on the type of pollution involved. Regulation of pollution of the marine environment through the atmosphere is left to the good faith of individual states.¹¹⁸ Therefore, the Convention may not provide much basis to argue the setting of the oil well fires falls within the duties imposed by the Convention.

On the other hand, the provision regarding dumping from ships and installations¹¹⁹ contains a minimum standard for national legislation and other measures: nations are to adopt laws and take other measures no less effective than global rules and standards.¹²⁰

¹¹⁷. Id. at Art. 194(3)(b) and (d).

¹¹⁸. Boyle, supra note 114 at 354.

¹¹⁹. Art. 1 of the Convention defines dumping to include "any deliberate disposal of wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea". Jamaica Convention supra note 112 at Art. I(5)(a)(i).

¹²⁰. Id. at Art. 210(6).

Given that the Jamaica Convention creates a broad but unspecified duty not to pollute the marine environment followed by references to unclear international standards, the Convention probably does not create an enforceable duty for which Iraq can be held responsible. It at least can be said that the Convention has advanced the state of international environmental law by codifying expressly the earlier broader state duty not to interfere as set forth in the Stockholm Conference's Principle 21. This codification creates a surer foundation for enforcing state responsibility for trans-boundary pollution and pollution in commons areas at some future point.¹²¹

4. Is Iraq Bound by the Jamaica Convention?

a. Application of the Vienna Convention

Even if it could be said that the Jamaica Convention created an enforceable duty upon Iraq as a Party to the Convention, since the Convention has yet to enter into force, it does not yet, of itself, bind Iraq.¹²² In addition, the

¹²¹. Boyle, supra note 114 at 367.

¹²². In this regard, Article 26 of the Vienna Convention embodies the customary international law norm of *pacta sunt servanda*: "Every treaty in force is binding upon the parties to it and must be performed by them in good faith." (emphasis added) See Vienna Convention on the Law of Treaties, May 22, 1969, 1155 U.N.T.S. 331, 8 I.L.M. 679 at Art. 26 [Hereinafter Vienna Convention].

Jamaica Convention will not apply retroactively once it does enter into force since no special provision has been provided for this within the Convention.¹²³

Nonetheless, there has existed since at least the late 1960's a customary international law norm obligating signatory states not to defeat the object and purpose of a treaty prior to its entry into force.¹²⁴ This norm emerged largely from the process leading up to the signing of the Vienna Convention. The process began with the creation of a preliminary draft by the International Law Commission, which began its work in 1951 and continued it into the mid-1960's. Later, the Draft Articles became the basis of the Vienna Conference on the Law of Treaties that was held in 1968 and 1969. Over the course of twenty years of study and debate, it

For a discussion of whether or not the environmental provisions of the Jamaica Convention reflect already existing customary international law norms, see the next subsection.

¹²³. The customary international law norm concerning retroactive effects of treaties is reflected in Article 28 of the Vienna Convention:

Unless a different intention appears from the treaty or is otherwise established, its provisions do not bind a party in relation to any act or fact which took place or any situation which ceased to exist before the date of the entry into force of the treaty with respect to that party.

See Vienna Convention supra note 122 at Art. 28.

¹²⁴. Rogoff, The International Legal Obligation of Signatories To An Unratified Treaty, 32 Me. L. Rev. 284 (1980).

became evident that there was general agreement among states that signatory states had such an obligation. The obligation was eventually included as Article 18 to the Vienna Convention.¹²⁵ The question then becomes what such an obligation means.

Reasonably, it should not mean that signatory states commit themselves to the same obligations as states ratifying the treaty. Such an interpretation would discourage states from signing any treaty until close to the time they are prepared to ratify it and only after the treaty has entered into force. As states choose accession over signature in order to preserve their freedom of action pending domestic affirmation of the obligation, this would increase the difficulty involved in concluding multilateral agreements.¹²⁶

The obligation not to defeat the object and purpose of a treaty means only that a signatory may not do something which would render the provisions of the treaty involved impossible to perform once it enters into force.¹²⁷ Having ratified the

¹²⁵. Id. at 287.

The Vienna Convention itself did not enter into force until 1980. Iraq is neither a signatory nor a party to the Vienna Convention.

¹²⁶. Id. at 299.

¹²⁷. For example, a state signing a treaty to protect an endangered animal species would defeat the object and purpose of the treaty if prior to entry into force of the treaty it funded a national hunting program which resulted in the extinction of that species. Hence it would be impossible to protect the species after the treaty entered into force as the animal had been completely wiped out.

Jamaica Convention, Iraq is still capable of complying with the general duties imposed once the treaty enters into force. The damage done in the oil spill and oil well fires will not make it impossible for Iraq to subsequently protect the marine environment.

b. Jamaica Convention Not Yet Customary International Law

Many of the provisions of the Jamaica Convention closely follow articles contained in the four Conventions adopted in 1958 by the First United Nations Law of the Sea Conference. These Conventions have been so widely adopted by states that they have become customary international law. This was reflected in their incorporation into the Jamaica Convention by consensus of the negotiating parties.¹²⁸ As to these provisions then, it can be said that the Jamaica Convention merely reflects existing customary international law. Iraq would therefore be bound by them even though the treaty has not yet entered into force. Within the Jamaica Convention those provisions not previously contained within the 1958 Conventions and not otherwise customary international law are not yet binding on Iraq.

The only mention of marine pollution in the 1958

¹²⁸. American Law Institute, Restatement (Third) of the Foreign Relations Law of the United States, Vol.II, p.5 (1987) [Hereinafter Restatement Third].

Convention on the High Seas was a provision requiring the parties to draw up regulations to prevent pollution of the seas by discharge of oil from ships or pipelines.¹²⁹ That provision fell far short of creating a general duty to prevent marine pollution such as exists under the Jamaica Convention. Since the marine pollution provisions of the Jamaica Convention are new, they cannot be said to be customary based upon the wide adoption of the 1958 Conventions. At the same time, neither considerable time has passed nor widespread and representative participation in the Jamaica Convention has been achieved so that it can be said that the Convention itself has spawned environmental customary norms.¹³⁰

B. The International Law Commission's Draft Articles on State Responsibility

The International Law Commission, a subsidiary organ of the General Assembly of the United Nations, has for over thirty years been working to codify the law of state responsibility which concerns internationally wrongful acts of States. In 1980, the Commission completed the "first reading" of Part I of its Draft Articles on State Responsibility which

¹²⁹. Convention on the High Seas, Apr. 29, 1958, 13 U.S.T. 2312, T.I.A.S. 5200, 450 U.N.T.S. 82 at Art. 24.

¹³⁰. See N. Sea Cases, infra note 73 and accompanying text. (Besides the fact that only 50 states have become parties, none of those which have are significant maritime nations.)

is entitled "The Origin of International Responsibility".¹³¹ In so doing, the Commission provisionally adopted the concept that an international crime may result from a "serious breach of an international obligation of essential importance for safeguarding and preservation of the human environment, such as those prohibiting massive pollution of the atmosphere or the seas".¹³²

The Commission's duties within the United Nations have included both codifying rules of existing law as well as promoting the progressive development of new law. In practice, the Commission has sometimes mixed these tasks.¹³³ Given the present state of conventional and customary law on the environment and the practice of states, the characterization of massive pollution of the atmosphere or the seas by a state as a crime would seem to fall within the progressive development of the law tasking of the Commission. While the Draft Articles may one day form the basis for state

¹³¹. Part I of the Draft Articles on State Responsibility, Report of the International Law Commission on the Work of its Twenty-Eighth Session, 31 U.N. GAOR Supp. (No. 10) at 175 (1976), U.N. Doc. A/31/10. (Since 1980, the Commission has been working on Part 2 of its Draft: "The Content, Forms and Degrees of International Responsibility".)

For a summary of the Commission's work on this draft, see S. McCaffrey, International Liability and International Water Courses: The Work of the International Law Commission Relating to International Pollution, in International Law and Pollution 109 n. 7 (D. Magraw ed. 1991).

¹³². Part I of the Draft Articles on State Responsibility, supra note 131 at Art. 19(3)(d).

¹³³. I. Brownlie, supra note 30 at 31.

liability for trans-boundary pollution, they do not presently evidence existing customary law. In view of the still tentative nature of the Commission's work in this area, the legality of the Iraqi oil "weapon" cannot be determined by reference to this Draft Article.

V. Principles of International Law Relevant to State Responsibility for Extra-Territorial Pollution Injury

A. Introduction

The last primary source of international law cited in Article 38 of the International Court is that of "the general principles of law recognized by civilized nations". While these principles are not specific rules formulated for direct application to particular legal issues, they do provide general legal truths common to developed legal systems which act as guide posts in fashioning decisions in specific cases.¹³⁴ Although their precise character has been widely debated,¹³⁵ international courts and tribunals have nonetheless repeatedly applied these principles in resolving specific cases.¹³⁶ As this paper will now develop, none of these principles has developed to the point that it can be said to have bound Iraq in its use of the oil "weapon".

¹³⁴. B. Cheng, General Principles of Law as Applied by International Courts and Tribunals 2-5 (1953).

¹³⁵. Id.

¹³⁶. Id. at 387-8.

B. The General Principle of Non-Interference

In the view of the law, the world is composed of states, each of which is internally sovereign (i.e. it has supreme authority) within its borders as well as externally independent to arrange its relations with other equally sovereign and independent states as it wishes.¹³⁷ The principle in international law of non-interference recognizes this essential personality of nations. This principle makes it the duty of each state to refrain from violating another state's sovereignty and independence.¹³⁸ This duty also includes the duty to prevent its own agents and citizens from violating another state's sovereignty and independence.¹³⁹

The duty of non-interference has been applied in a number of contexts. The Corfu Channel Case has commonly been cited for the International Court's statement of this principle.¹⁴⁰

¹³⁷. L. Oppenheim, International Law 286 (H. Lauterpacht, 8th ed. 4th. printing 1960).

¹³⁸. According to Judge Lauterpacht, the municipal law principle "sic utere tuo ut alienum non laedas" (use your own property so as not to injure the property of another) is equally applicable to relations between states as it is to relations between individuals. Id. at 346.

Professor Cheng notes that municipal law principles will naturally be applied by international courts and tribunals in those cases where a basic analogy can be drawn between the two systems. B. Cheng, supra note 134 at 391.

¹³⁹. Id. at 288.

¹⁴⁰. The Court held that it is "Every state's obligation not to allow knowingly its territory to be used for acts contrary to the rights of others". See Corfu Channel Case (1949) I.C.J. Rep. 4, 22.

As population, technology and awareness of the interrelated nature of the world environment all grew, it became a logical application of the international principle of non-interference to apply it in cases involving trans-boundary pollution.

That application occurred in the Trail Smelter Arbitration, which is famous as the first (and as yet only) international adjudication of a pollution dispute.¹⁴¹ The arbitration tribunal established in the case found Canada to be responsible under international law for damage caused in the United States resulting from air pollution originating from the Trail Smelter plant in Canada. Under the unique agreement establishing the arbitration, the tribunal considered both U.S. domestic law as well as international law. This unusual procedure, when added to the limited precedential value of arbitration decisions, make Trail Smelter a questionable precedent on which to rely on for an extension of the principle of non-interference into the area of trans-boundary pollution.¹⁴²

C. Principle 21 of the Stockholm Conference

A firmer foundation was laid during the United Nations

¹⁴¹. Trail Smelter Case, 3 United Nations Report of International Arbitral Awards 1905 (1947).

¹⁴². See J. Barros and D. Johnston, The International Law of Pollution 69-76 (1974).

Conference on the Human Environment, held in Stockholm, Sweden, in 1972. At the conclusion of the Conference, the representatives of 114 countries published a declaration which included 26 principles upon which they felt states shared a common conviction. In Principle 21, the delegates applied the principle of non-interference to the environment, finding that states have "...a responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or areas beyond the limits of national jurisdiction.¹⁴³ While the Stockholm Declaration was only hortatory¹⁴⁴, nonetheless, it changed the way

¹⁴³. Stockholm Declaration of the United Nations Conference on the Human Environment, Jun. 16, 1972, 11 I.L.M.1416.

Principle 21 extends the non-interference principle to create liability for environmental damage done not only to the territory of other states but also to the high seas and other world commons areas. This is an unprecedented extension of the non-interference principle and should be viewed cautiously in light of the potentially tremendous expansion of state liability beyond the political and economic capability of most states to accept.

Principle 21 should therefore be viewed as an established principle of international law only to the extent that it makes a state responsible for environmental damage in the territory and territorial sea of another state. See Okidi, supra note 29 at 72-3. See also L. Caldwell, International Environmental Policy 122 (2nd. ed. 1990). But see Restatement Third supra note 128 at Vol. II, Sec. 601(1)(b) 103.

¹⁴⁴. This is underscored by the continued inability of the parties to the London Dumping Convention who, despite having specifically cited Principle 21 in the Preamble to the Convention, have as yet been unable to develop procedures for assessing liability and settling disputes regarding dumping in accordance with this principle as called for in Article X of that Convention.

It is further underscored by the continued general state practice of permitting the emission of trans-boundary

nations viewed the environment. Enforcement of the non-interference principle awaits the further maturing of the international law process, but its recognition in the context of trans-boundary pollution has been established and the way open for further development by states of international law in this area.¹⁴⁵

pollution from their territory.

¹⁴⁵ Some authors have asserted that the principle of non-interference has been incorporated into the body of customary international law with regard to transboundary pollution. See e.g. Lee, International Law and the Canada-United States Acid Rain Dispute, in International Law and Pollution, supra note 131 at 322.

Others point out that the bulk of state practice supportive of such a norm has been limited to Europe and North America. Hence it is of yet not sufficiently representative to establish a customary law norm. See Magraw, Transboundary Harm: The International Law Commission's Study of International Liability, 80 A.J.I.L. 305 (1986) at 320.

Commenting on the noticeable lack of comparable cases to Trail Smelter despite the passage of many years, Professor Handl noted that most states are reluctant to submit such issues to international adjudication. He also noted a movement among states toward adopting soft norms which in turn reflected a sense of soft responsibility for international matters. See Proceedings, 77th Annual Meeting, American Society of International Law 433-34 (1983) reprinted in J. Sweeney, C. Oliver, N. Leech, The International Legal System 305 (3rd ed. 1988). This lack of comparable cases is further evidence that state practice has not yet sufficiently developed for the creation of a customary law norm.

Even assuming the acceptance of Principle 21 as customary international law, it would make little difference in analyzing the legality of Iraq's behavior. Certainly, international tribunals are more willing to rely upon established customary international law norms than they are principles of law. This reflects the lack of a definite consensus among international lawyers on the precise significance of the principles. See I. Brownlie, Principles of Public International Law 15-17 (4th ed. 1990). Nonetheless, even as customary law, Principle 21 is still too general to solve concrete disputes. See Bothe, International Legal Problems of Industrial Siting in Border Areas and National Environmental Policies in Transfrontier Pollution and

VI. Conclusions Regarding Iraqi Liability Under International Environmental Law

The spilling of a large quantity of crude oil in the Persian Gulf at Sea Island Terminal and the igniting of over 500 oil well fires were violations of international environmental law in that they violated Iraq's duty, as a party to the Kuwait Regional Convention, to prevent the pollution of the Persian Gulf by discharges from ships, dumping from ships and discharges from land (including air-borne means). These acts also violate the principle that a state may not cause damage to the environment of other states. However, as is so often the case in international law, the conclusion of state responsibility for violation of treaty provisions, customary norms and principles of international law bring only the possibility of a legal beginning. Measures for redressing this violation of international law will be discussed in Part Three of this paper.

Part Two: Law of Armed Conflict Analysis

The international law of armed conflict has been in development through much of recorded history, but has only begun to really mature within the past century. The focus in developing restrictions on combatants has been on limiting

the Role of States (Organization for Economic Cooperation and Development 1981).

unnecessary human suffering. Protection of the environment has largely been left unaddressed.¹⁴⁶

Measuring the Iraqi conduct regarding the Sea Island Terminal spill and the oil fires under the international law of armed conflict can be done by considering two conventions: the 1907 Hague Convention IV Respecting the Laws and Customs of War on Land¹⁴⁷ because of its customary law content; and the 1949 Geneva Convention IV Relative to the Protection of Civilian Persons in Time of War¹⁴⁸ since Iraq is a party to that Convention.

VII. Relevant Customary & Conventional International Law of Armed Conflict

A. Development & Overview of Customary Law Under the 1907 Hague IV Regulations

The Hague IV Regulations provide rules for limiting the

¹⁴⁶. An attempt to provide some protection for the environment during international armed conflicts was made in drafting Protocol I to the 1949 Geneva Conventions. The merits of that attempt are analyzed in section XIII(A) page 139.

¹⁴⁷. Convention Concerning the Laws and Customs of War on Land (Hague IV), Oct. 18, 1907, 36 Stat. 2277, TS 539, reprinted in A. Roberts & R. Guelff, Documents on the Law of War 43 (1989) [Hereinafter Hague IV]. (Most of the substance of this convention is contained in its Annex entitled Regulations Respecting the Laws and Customs of War on Land. Articles contained within the Annex will hereinafter be referred to as Hague IV Regulations.)

¹⁴⁸. Convention Relative to the Protection of Civilian Persons in Time of War, Aug. 12, 1949, 6 U.S.T. 3516, T.I.A.S. 3365, 75 U.N.T.S. 287 [Hereinafter GC].

means of injuring the enemy and also rules for governing a belligerent's control over enemy-occupied territory. Pertinent to the Iraqi oil "weapon" are regulations that limit a belligerent's seizure and use or destruction of enemy property. The Regulations provide different limitations depending on whether or not at the time the property is seized or ordered destroyed, active military operations are underway or an occupation of enemy territory has taken place. During the course of active military operations, a belligerent may seize or even destroy any enemy property, whether public or private, so long as this is "imperatively demanded by the necessities of war".¹⁴⁹ "Active military operations" include not only engaging in battle but also preparations for battle or siege.¹⁵⁰

Once active military operations have ceased, a belligerent occupying enemy territory may seize and keep cash,

¹⁴⁹. Article 23(g) states: "In addition to the prohibitions provided by special Conventions, it is especially forbidden- ... (g) To destroy or seize the enemy's property, unless such destruction or seizure be imperatively demanded by the necessities of war;..." Hague IV Regulations, supra note 147 at Art. 23. See also M. Greenspan, The Modern Law of Land Warfare 281 (1959).

The emphasis on military necessity is further underscored by Article 28: "The pillage of a town or place, even when taken by assault, is prohibited. Hague IV Regulations, Id. at Art. 28.

By pillage, it is generally meant the taking of property by individual soldiers acting on their own. See G. von Glahn, The Occupation of Enemy Territory... A Commentary on the Law and Practice of Belligerent Occupation 228 (1957).

¹⁵⁰. L. Oppenheim, supra note 137 at Vol. II, 413.

funds and securities belonging to the enemy state (though not its individual citizens). A belligerent may also seize and keep all enemy public movable property usable for military operations.¹⁵¹ Public property which is not movable, but which has a military nature, may be seized and used or even destroyed if required by absolute military necessity.¹⁵²

Finally, real public property not of a military nature may be seized and used in accordance with the rules applying to one who is a usufructuary.¹⁵³ In this capacity, a

¹⁵¹. Article 53 states:

An army of occupation can only take possession of cash, funds, and realizable securities which are strictly the property of the State, depots of arms, means of transport, stores and supplies, and, generally, all movable property belonging to the State which may be used for military operations.

All appliances, whether on land, at sea, or in the air, adapted for the transmission of news, or for the transport of persons or things, exclusive of cases governed by naval law, depots of arms, and generally, all kinds of munitions of war, may be seized, even if they belong to private individuals, but must be restored and compensation fixed when peace is made.

Hague IV Regulations, supra note 147 at Art. 53.

¹⁵². Greenspan, supra note 149 at 287. (Included in this category of property would be barracks and arsenals as well as strategic assets such as bridges, docks and air fields.)

¹⁵³. Art. 55 states:

The occupying state shall be regarded only as administrator and usufructuary of public buildings, real estate, forests,

belligerent may use the property and extract products from it, so long as this activity does not exceed what is usual or necessary and does not damage the property.¹⁵⁴ The duty to act as a usufructuary continues until the occupied territory is either restored to the possession of the enemy or annexed by the occupying belligerent.

A belligerent occupying enemy territory has more limited rights regarding private property, which may be seized only if it has direct military use. After peace is made, such property must be restored to the owner and compensation for his or her losses made at that time.¹⁵⁵

and agricultural estates belonging to the Hostile State, and situated in the occupied country. It must safeguard the capital of these properties, and administer them in accordance with the rules of usufruct.

Hague IV Regulations, supra note 147 at Art. 55.

¹⁵⁴. Greenspan, supra note 149 at 288. (Thus crops may be raised, timber cut and metals and minerals extracted from mines.)

As in the area of active military operations, an occupier may not pillage enemy property. See Hague IV Regulations, supra note 147 at Art. 47.

¹⁵⁵. Greenspan, supra note 149 at 296. See also Hague IV Regulations, Art. 53, infra note 151.

Modern warfare, with its increased intensity and scope, has arguably expanded the notion of what constitutes "war munitions". To what extend this is so is uncertain.

1. Extent to Which Iraq is Bound by the Hague IV Regulations

At the time that the Hague IV Regulations were open for signature, Iraq was part of Turkey, which signed but has never ratified the Convention. Even if Turkey had become a party, Iraq, even though a successor government to Turkey, still would not have been bound by the Convention during the 1991 Gulf War. That is because in order to apply in an armed conflict, the Convention requires that all belligerents must be parties to it.¹⁵⁶ Neither Kuwait nor Saudi Arabia as well as many other Coalition nations were parties to Hague IV.

Nonetheless, to the extent that it was the general practice of states to follow the Hague IV Regulations out of a belief that to do so is required under international law, the Convention has become part of customary international law.¹⁵⁷ As reflective of customary law, the Hague IV Regulations would be binding on Iraq notwithstanding the fact that it is not a party to the Convention. A powerful precedent for the proposition that the Hague IV Regulations are customary international law is found in the Judgment of the International Military Tribunal at Nuremberg. In the opinion of the Court, the rules laid down in Hague IV had by 1939 been recognized by all civilized nations and were

¹⁵⁶. Hague IV, supra note 147 at Art. 2.

¹⁵⁷. North Sea Cases, supra note 73.

considered as being customary law.¹⁵⁸ This opinion was echoed by a 1946 U.N. General Assembly Resolution which affirmed "the principles of international law recognized by the Charter of the Nuremberg Tribunal and the Judgment of the Tribunal."¹⁵⁹ In 1950, the International Law Commission, acting at the direction of the General Assembly, repeated the International Military Tribunal's inclusion of the prohibitions enumerated by the Hague IV Regulations as crimes punishable under international law.¹⁶⁰ The concept that the Hague IV Regulations were binding on all states was therefore

¹⁵⁸ . Trial of the Major War Criminals Before the International Military Tribunal, Nuremberg, Vol. XXII, IMT Secretariat, Nuremberg, 1948, 497, reprinted in Roberts and Guelff supra note 147 at 155. (The Court's opinion affirmed the Allies' decision to include among the "war crimes" listed in the Charter of the Tribunal the "plunder of public or private property" and "devastation not justified by military necessity." Id. at 413-14.)

¹⁵⁹ . Resolutions Adopted by the General Assembly During the Second Part of Its First Session From 23 October to 15 December 1946 (1947), G.A. Res. 95, Dec. 11, 1946, reprinted in D. Djonovich, United Nations Resolutions, Vol. I, 175 (1973).

Although U.N. General Assembly Resolutions are in general not binding upon member states, when they concern general norms of international law and are accepted by a majority vote, they evidence the opinion of states and therefore serve as a forum for state practice. As this resolution meets such criteria, it is part of the customary law process. See I. Brownlie, supra note 30 at 14-15 and 695. (Professor Brownlie specifically cites this resolution as an example of an important law-making U.N. General Assembly Resolution.)

¹⁶⁰ . Principles of International Law Recognized in the Charter of the Nuremberg Tribunal and in the Judgment of the Tribunal, adopted by the U.N. Int'l Law Comm'n (1950), Principle VI(b), reprinted in D. Schindler and J. Toman, The Law of Armed Conflict: A Collection of Conventions, Resolutions and Other Documents 835 (1981).

well published and of long-standing by the time Iraq invaded Kuwait.

B. Development & Overview of Conventional Applicable Law Under 1949 Geneva Convention IV

Following World Wars I & II, a further attempt was made to codify rules governing conduct of belligerents during armed conflict. Unlike the Hague IV Regulations, where the emphasis had been on the treatment of combatants, the Geneva Conventions of 1949 focused on protecting non-combatants. It was the intent of the parties of the GC to build upon, rather than replace, the Hague IV Regulations regarding protections for civilian property.¹⁶¹ Since the Hague IV rules covered the issue of enemy property rather extensively, relatively little mention is made of the subject in the GC. Nonetheless, the GC does state that a belligerent occupying enemy territory may only destroy real or personal property, whether public or private, if such destruction is required by absolute necessity of military operations.¹⁶² This article was intended to add

¹⁶¹. Article 154 of the GC explicitly states that parties to the GC who are also parties to the Hague IV Regulations will continue to be bound by the Regulations, with the GC being viewed as supplementary to the Regulations. See GC, supra note 148 at Art. 154.

¹⁶². Art. 53 states:

Any destruction by the Occupying Powers of real or personal property belonging individually or collectively to private persons or to the State, or to other

a specific prohibition against destroying private property absent absolute military necessity.¹⁶³ As to public property, the GC therefore repeats the restriction of the Hague IV Regulations not to destroy it without military necessity.

Having become a party to the GC in 1956, Iraq would of course be bound by this provision.

C. Nature of Kuwaiti/Iraqi Crude Oil

The Iraqi act of discharging crude oil into the Gulf and setting fire to the oil wells involved two aspects of destruction of enemy property: the destruction of the oil itself and also the resulting additional damage and destruction to the ecosystem within Saudi and Kuwaiti territorial waters. With regard to the latter, the legality of destroying this property turns on the nature of the oil. It is therefore first necessary to determine the answer to

Public authorities, or to social or cooperative organizations, is prohibited, except where such destruction is rendered absolutely necessary by military operations.

Id. at Art. 53.

¹⁶³ H. Levie, The Code of International Armed Conflict, Vol. 2, 766 (1986). (Articles 23(g) and 53 of the Hague IV Regulations could be read to only prohibit unnecessary destruction of public property and unnecessary seizure of private property.)

The GC also states that pillage of property belonging to enemy civilians in the hands of a belligerent is prohibited. See GC, supra note 148 at Art. 33.

three questions concerning the nature of the Kuwaiti oil involved¹⁶⁴: Was the Kuwaiti oil public or private property; movable or immovable in nature; and located within the land occupied or annexed by the enemy?

1. Public or Private Property

Since 1980, the entire oil industry of Kuwait has been owned and operated by the Kuwaiti government through the Kuwait Petroleum Corporation. This remarkable enterprise operates a vertically integrated oil company extending from the extraction of crude oil in the ground, through the refining of it into numerous petroleum products, to the actual marketing of some of these products at government owned gas stations throughout Western Europe.¹⁶⁵ The Kuwaiti crude used by the Iraqis in the oil spill and destroyed in the oil well fires was therefore state-owned property.

¹⁶⁴. As previously detailed, the Iraqi oil weapon involved two sources: Iraqi crude oil pumped from oil tankers berthed at the Mina al Ahmadi port facility; and Kuwaiti crude oil pumped from and burned at Kuwaiti oil storage facilities and Kuwaiti oil fields.

Under the international law of armed conflict cited above, Iraq was free to destroy its own oil by discharging it into the Gulf. However, as to any damage done to enemy state or private property in the process, Iraq would continue to be subject to the restriction already discussed: that any such destruction is justified only on the basis of military necessity for doing so.

¹⁶⁵. J. Anthony, Arabia: Kuwait, The New Encyclopaedia Britannica, Macropaedia (1989).

2. Movable or Immovable Property

The Hague IV Regulations draw distinctions in the area of occupations between public property which is movable and used for military operations and public property that is immovable such as buildings, forests and agricultural estates.¹⁶⁶ These distinctions determine the degree of use to which a belligerent may put the enemy government property. It has been argued in the context of Israel's occupation of the Sinai that crude oil could be viewed as movable public property which may be used for military operations.¹⁶⁷ While this is an interesting argument, it violates the common sense notion of the nature of crude oil. After all, crude oil is buried under ground, and must first, by means of increasingly complex machinery in the hands of skilled technicians, be extracted, stored, transported, refined and distributed before it may be used for military operations.¹⁶⁸ Timber from forests and

¹⁶⁶. Hague IV Regulations, Articles 53 and 55, infra notes 151 and 153.

¹⁶⁷. Dinstein, The International Law of Belligerent Occupation and Human Rights, 8 Israel Yearbook on Human Rights 104, at 130 (1978).

¹⁶⁸. See Singapore Oil Stocks Case, Singapore, Court of Appeal, 1956, 23 I.L.R. 810, 51 A.J.I.L. at 802 (1957). (The majority opinion found Britain's seizure of Dutch owned crude oil from Japanese military forces as "war booty" to be illegal. In so doing, the Court rejected the argument that crude oil was a war munition (and hence movable property).) But see E. Wallach, Treatment of Crude Oil as a Munition de Guerre: A Reexamination of United States Policy in the Light of Past Practice, (January 21, 1991) (unpublished manuscript).

crops from agricultural estates are specifically listed as forms of immovable property in the Hague IV Regulations.¹⁶⁹ If goods such as these are explicitly listed in the key provision of the Convention as immovable goods, then crude oil, which require considerably more processing before being consumed than timber and crops, can readily be viewed as immovable property as well.

3. Active Military Operations, Occupation or Annexation

The laws of armed conflict outlined above only apply if the alleged violations occurred during active military operations or during an occupation. If Iraq had successfully annexed Kuwait by mid-January, then the laws of armed conflict would not have applied. Active military operations end and occupation begins when a territory is actually placed under the authority of a hostile army.¹⁷⁰ Once an invasion into another state renders the enemy government incapable of publicly exercising its authority, the invader has successfully substituted his own authority in the

¹⁶⁹. Hague IV Regulations, supra note 147 at Art. 55.

¹⁷⁰. Hague IV Regulations, Art. 42 states: "Territory is considered occupied when it is actually placed under the authority of the hostile army. The occupation extends only to the territory where such authority has been established and can be exercised."
Id. at Art. 42.

territory.¹⁷¹

Occupation is expected to be a temporary condition. The original government will either reassert its authority through force of arms or a negotiated settlement, or the belligerent state will legally annex the occupied territory. A belligerent may lawfully annex a territory only after the state of war from which the occupation arose has ceased. So long as the ousted government is substantially continuing the general hostilities arising from the initial invasion, annexation cannot be legally effective.¹⁷²

Once annexation is effected, then all property belonging to the previous government becomes the property of the new government which invaded the territory.¹⁷³ The Hague IV Regulations and GC Art. 53 would therefore no longer apply since the territory is no longer occupied, and the title of the former state's property has been transferred to the invading belligerent state. This is provided for explicitly

¹⁷¹. G. von Glahn, supra note 149 at 28.

Iraq was able to achieve the occupation of Kuwait within 3 days of the August 2nd invasion, as Kuwaiti organized resistance quickly collapsed. Although active hostilities renewed in January, 1991 with the opening of the Coalition air war, the August-December 1990 period was a period of military occupation.

¹⁷². J. Stone, Legal Controls of International Conflict 720 (1954).

¹⁷³. Oppenheim, supra note 137 at 397.

within the GC.¹⁷⁴ Iraq was able to crush all opposition by Kuwaiti conventional forces and install a puppet government only two days after the start of its invasion.¹⁷⁵ It promptly thereafter declared that it had "comprehensively and eternally merged" with Kuwait, making it a province of Iraq.¹⁷⁶

However, two things prevented Iraq from legally asserting annexation of Kuwait. First, the Emir of Kuwait was able to flee the country and to gather surviving Kuwaiti conventional forces in order to continue hostilities. Second, the United Nations Security Council condemned the Iraqi invasion as a breach of international peace and security¹⁷⁷ and decided that the annexation itself was illegal, null and void.¹⁷⁸

¹⁷⁴. Art. 6 states in pertinent part:

... In the territory of Parties to the conflict, the application of the present military Convention shall cease one year after the general close of military operations; However, the Occupying Power shall be bound, for the duration of the occupation, to the extent that such Power exercises the function of government in such territory, by the provisions of the following articles of the present Convention: 1 to 12, 27, 29 to 34, 47, 49, 51, 52, 53, 59, 61 to 77, 143...

GC, supra note 148 at Art. 6.

¹⁷⁵. J. Whelan, World Affairs: Middle East and North Africa- Kuwait, 1991 Britannica Book of the Year 411 (1991).

¹⁷⁶. Id.

¹⁷⁷. S.C. Res. 660, Aug. 2, 1990, (S/RES/660(1990)).

¹⁷⁸. S.C. Res. 663, Aug. 9, 1990, (S/RES/663(1990)).

Since Iraq never lawfully annexed Kuwait, this paper will analyze the Iraqi oil spill and oil well fires in the context of both active military operations, as suggested above, as well as in the context of an occupation, to be discussed below.

D. Conclusion Regarding Rule to Be Applied

The Kuwaiti oil released from the Sea Island Terminal and burned from oil wells throughout Kuwait was immovable public property. Depending on the intent one imputes to the Iraqis, the international law to be applied is either that of treatment of enemy property during active military hostilities or during occupation. If we assume the intent behind the oil spill and oil well fires was to employ a means to injure Coalition forces in the context of ongoing hostilities, then the legal test is that of imperative (or absolute) military necessity as outlined by the Hague IV Regulations, Article 23(g) and GC, Article 53. On the other hand, if we assume the Iraqis acted out of an intent to destroy the public property of Kuwait, then the legal test is the duty both as a usufructuary as outlined by the Hague IV Regulations, Article 55 and a belligerent again under GC, Article 53. The Sea Island spill and the oil well fires will be analyzed under each theory.

E. The Sea Island Terminal Oil Spill as a Means Employed During Active Military Operations

There are a number of facts which support a theory that the Iraqis intended to use the Sea Island oil spill as a weapon against Coalition forces. First, the timing of the release suggests it was done out of fear of an imminent U.S. amphibious landing on the Kuwaiti coast. Although the Iraqis could have destroyed the oil by releasing it into the sea in early August, they chose not to do so until January 19th. This was only 3 days after the Coalition began its air campaign. The lack of resistance met during the initial days of the air war suggests that the Iraqis did not expect an offensive by Coalition forces. When that attack came, the shock was therefore all the greater. Knowing that the U.S. had a potent amphibious force steaming near the Kuwaiti coast¹⁷⁹ and being stunned by the air attack, the Iraqi commanders may have feared an imminent assault from the sea for which they had not fully prepared, and in desperation, decided to cause the massive oil spill in order to hamper such a landing. With water currents and prevailing winds in the Persian Gulf at the time of release moving counterclockwise, the Iraqis could have expected the slick to move generally

¹⁷⁹. Zolton, Amphibious Feints Force Iraqis to Squander Manpower, Navy Times, Mar. 11, 1991 at 12. (During the Desert Storm build-up, Marine forces staged several large amphibious assault exercises. These were well covered by the media, which was given greater than usual access to the forces practicing on these occasions.)

south albeit with uncertainties as to speed and movement adjacent to the shoreline.¹⁸⁰

U.S. analysts pointed to several potential tactical purposes for the spill. The oil could conceal floating contact mines sowed along the beach approaches. It could also foul the intakes of amphibious assault craft and even larger amphibious warfare ships operating in waters near the beaches. Both craft rely on water drawn from the sea for cooling. More speculative, would be an intent to ignite the oil off beaches once the actual amphibious landing commenced.

Another motive for using the oil slick as a weapon had potentially far greater consequences for Coalition forces. If the slick was able to inundate the Saudi coast line as far south as the cities of Jubail and al-Khobar, it could force the closure of desalination plants. These plants supplied almost all the drinking water for Saudi Arabia's Eastern Province and for the capital city of Riyadh. Included within this area were more than 600,000 U.S. and other Coalition ground troops.¹⁸¹ Cutting off drinking water would have

¹⁸⁰. Atkinson and Balz, supra note 8 at A1. However, according to U.S. Coast Guard officials, prevailing winds in January were northwesterly from the Saudi coast tending to keep the oil off the coast. See Isikoff, Wind Called Key Factor in Damage From Oil Spill, Wash. Post, Jan. 31, 1991 at A24.

¹⁸¹. Lippman and Booth, supra note 2 at 13 and 16. (The desalination plants work on a "reverse osmosis" process which uses sensitive filters to screen out salt molecules from the water. If oil reached the filters, they would be overwhelmed and the plants unable to operate.)

disastrous effects on troops operating in the desert heat. A secondary benefit of a successful shut-down of the desalination plants would be the closing of Saudi Arabia's largest industrial complex at Jubail, including electric generating plants. These electric utilities and manufacturing plants rely on fresh water for cooling.¹⁸²

If such was the Iraqi intent, was the oil release justified by military necessity? If Hague IV Regulations Article 23(g) permits destruction of enemy property when "imperatively demanded by the necessities of war"¹⁸³, and GC Article 53 permits destruction of property when "rendered absolutely necessary by military operations"¹⁸⁴, did the Iraqi destruction of up to 3 million barrels of oil belonging to the Kuwait government and the vast ecological damage within the territorial waters of Kuwait and Saudi Arabia meet these tests?

1. The Concept of Military Necessity

Neither military manuals nor learned law texts provide a precise definition of the concept of military necessity.¹⁸⁵

¹⁸². Isikoff, Saudis Brace for Onslaught of Oil Slick, Wash. Post, Jan. 27, 1991 at A22.

¹⁸³. Hague IV Regulations, Art. 23(g), infra note 147.

¹⁸⁴. GC, Art. 53, infra note 151.

¹⁸⁵. G. von Glahn, supra note 149 at 225.

According to Professor McDougal, "... this concept may be said to authorize such destruction, and only such destruction, as is necessary, relevant, and proportionate to the prompt realization of legitimate belligerent objectives".¹⁸⁶ The concept therefore includes several elements. First, there must be a need for the use of the force to further the defeat of the enemy. Second, the force used must be capable of being regulated. Third, an element of proportionality in which the collateral damage caused in the attack must not be disproportionate to the military gain expected. A gross disparity between the amount of destruction resulting and the military results achieved would be evidence of lack of military necessity.¹⁸⁷ While the character of military necessity is more a modest concept than an absolute rule, it nonetheless provides a limit on the action of the military commander.¹⁸⁸ This is confirmed by the rejection during the post-World War II war crimes trials of the German doctrine of kriegsraison, under which the military commander had unlimited discretion in committing acts of destruction in furtherance of war aims.¹⁸⁹ The military necessity concept is one of reasonableness under the conditions in which the use of force

¹⁸⁶. M. McDougal and F. Feliciano, Law and Minimum World Public Order 72 (1961).

¹⁸⁷. M. Greenspan, supra note 149 at 280.

¹⁸⁸. M. McDougal and F. Feliciano, supra note 186 at 80.

¹⁸⁹. M. Greenspan, supra note 149 at 279.

was made. Therefore, no general rule can be established in defining what is military necessary. Each instance must be judged based on the facts peculiar to it.¹⁹⁰

2. Military Necessity of the Sea Island Terminal Spill

The U.S. amphibious forces and the desalinization plants were both "legitimate military objectives". As regular armed forces of the enemy, the amphibious forces were obviously legitimate targets. The desalinization plants were also legitimate targets given the tremendous impact within a short time that their shut-down would have had on the effectiveness of Coalition ground forces.¹⁹¹ But having met the first

¹⁹⁰. G. von Glahn, supra note 149 at 226.

¹⁹¹. Some might argue that since these vital facilities provided water to 18 million civilians living in the area, they should be legally immune from attack. The debilitating effect the cut-off would have had on the 600,000 Coalition ground forces would nonetheless have justified the targeting of the plants.

It should also be pointed out that the Coalition air campaign shut down the Baghdad city water system as a result of successful attacks upon the electric utilities and chlorine factories on which it relied to operate its water filtration plants. As a result, there was a significant chance of devastating cholera and typhoid epidemics developing among the city's 4 million inhabitants if repairs could not quickly be made. See Okie, Health Official Sees Threat of Epidemics in Iraq, Wash. Post, Feb. 26, 1991 at A10. See also Hockstader, Water Problems Pose Health Crisis in Iraqi Capital, Wash. Post, Mar. 4, 1991 at A15.

It is therefore evident that the U.S. did not consider water facilities immune from shutdown when there were otherwise legitimate reasons for attacking supporting facilities. Since the electric grid also served military installations and other war-supporting activities, and chlorine may be used to manufacture poison gas, the U.S.

elements of military necessity, the oil "weapon" fails the remaining two elements.

First, the "weapon" chosen by the Iraqis to attack the amphibious force and desalinization plants was too unregulated to be reasonably certain that its use would result in the damage to the military objective sought. The movement of the released oil from the terminal 10 miles off the Kuwaiti coast was completely dependent on winds and currents. It could not be reasonably predicted whether the oil would hug the coast far enough south to actually inundate beach areas in Kuwait or the desalinization plants in Saudi Arabia. In fact, as of mid-February, the oil was trapped in an area off the Saudi coast well north of Jubail but far south of potential beach assault areas in Kuwait.¹⁹² In comparison, even the Scud missile appeared to be highly accurate.

Additionally, further reducing the probability of success was the ability of the Saudis to deploy a protective system of oil booms to keep the oil from reaching the intakes at desalinization and electric utility plants. The Saudis had extensive experience with using booms because of the

considered each to be legitimate targets for attack.

¹⁹². Society of Organizations for Reparations for the Environment, press conference, Mar. 19, 1991, Dr. Malcolm Spaulding, NEXIS, currntfile:Kuwait Regional Convention. [Hereinafter SORE.]

occurrence of previous oil spills in the Gulf.¹⁹³

In regard to the anticipated amphibious landing, the argument is even more compelling. Besides the uncertainty that the oil would actually reach any beach areas in significant quantities, the oil would only remain in effective concentrations for a few days after release. It was estimated that a third of the oil dissipated within two days of the release.¹⁹⁴ Since Sea Island Terminal is located well south of the Kuwaiti coast, most of the shoreline would not be covered by the slick, including those areas around Kuwait City and Basra.¹⁹⁵

In addition, U.S. officials claimed, at least publicly, that it would be difficult to ignite crude oil floating on water.¹⁹⁶ It is interesting to note that in anticipation of

¹⁹³. Isikoff, supra note 182 at A22.

How effective the booms would have been was open to much debate. It was said that seas often reached nine feet in January, which would have been large enough to overcome the booms. Additionally, some officials feared the oil would sink to the bottom and be pulled under the boom by tidal action. See Longo, Saddam's Oil Spill Weapon Deemed 'Environmental Terrorism', Navy Times, Feb. 11, 1991, at 25.

¹⁹⁴. SORE, supra note 192.

¹⁹⁵. Gellman, Theories Vary on Motive for Spill, Wash. Post, Jan. 26, 1991 A16.

¹⁹⁶. Id. at A13. (Coast Guard ADM Kime commented that such a technique could have been useful in cleaning up the Exxon Valdez spill but was simply not feasible. Other officials pointed out that whatever ability there was to ignite the oil would diminish each day the oil was in the water. Nonetheless, some officials suggested that it might be possible to combine gasoline with crude oil to create a combustible mixture.)

an invasion of Great Britain by the German Army in 1940, both the British and the Germans carried out extensive experiments to test the practicality of covering water surface areas adjacent to beaches where amphibious landings were imminent with burning oil.¹⁹⁷ Both belligerents reached the conclusion that the plan was unworkable.¹⁹⁸

The Iraqi oil "weapon" also fails the last element of military necessity in that the collateral damage done to defeat an amphibious landing was completely disproportionate to the objective sought. The list of short and long-term environmental damage in the Gulf discussed earlier details the extensive effects on the economy and ecosystem.

In conclusion, a weighing of all these elements establishes a lack of military necessity for the Sea Island Terminal spill if the intent behind it was to attack Coalition

¹⁹⁷. B. Collier, The Defense of the United Kingdom 133 (1957). (The British established a small Petroleum Warfare Department, which tested a number of flame weapons, including attempts to "set the sea on fire".)

See also W. Ansel, Hitler Confronts England 244 (1960). (Both the German Army and Navy studied the problem with a view toward overcoming any British use of this "weapon". Both services developed workable counter-measures. The Navy found that special fire-fighting tugs could be used, each towing a long chain of logs. The logs would be maneuvered to corral the burning oil and then tow it out to sea. It would then be extinguished by means of materials carried aboard the tugs.)

¹⁹⁸. They found that the oil had to be both light enough to ignite readily but heavy enough to sustain a continuing blaze. The German Navy found it took an extravagant amount of oil which then had to be boosted with gasoline and special ignition methods. The scheme was found to be most workable in isolated areas such as marshlands behind the beaches. See Ansel, supra note 197 at 244.

forces.

F. The Oil Well Fires as a Means Employed During Active Military Operations

There is some evidence suggesting that the oil well fires were ignited by the Iraqis as a method of obscuring military targets from attack by Coalition forces, particularly from the air. Once again, the timing of the setting of the fires would be consistent with such an intent. The first group of wells were ignited in the Wafra field at about the same time as the Sea Island Terminal oil release. This coincided with the beginning of the Coalition air campaign, which had included targets in southern Kuwait where the Wafra Field was located. This act was small compared to the attempted arson of virtually every Kuwaiti oil well during a 5-day period in February immediately preceding the commencement of the Coalition's ground offensive.

The black smoke emitted from the furiously burning wells can serve two tactical purposes. First it can obscure visual acquisition of military targets. Pilots particularly need to see small targets such as tanks and artillery emplacements in order to drop their bombs accurately. 90-95% of all air munitions used in the war were "dumb" bombs, the successful delivery of which requires knowing where the target is well in

advance of their release.¹⁹⁹ While some aircraft carry radar capable of identifying large fixed targets, accuracy can be degraded when the pilots are unable to actually see the target. The smoke can also cause pilots to have to drop lower in altitude in order to spot the target. This makes them more vulnerable to anti-aircraft gun fire.²⁰⁰

Secondly, the smoke can affect the accuracy of "smart" bombs which rely on either a television-type picture transmitted from a camera located in the nose of the bomb or on a laser beam illuminating the target and usually emanating from an aircraft overhead. The smoke can obscure the "view" of the target for the camera as well as interrupt the laser beam on which the bomb depends in locating its target.²⁰¹

1. Military Necessity of the Oil Well Fires

If the Iraqi intent in burning crude oil from over 500 wells and attempting to do so in 300 more was to obscure Iraqi military targets, was this action justified by military necessity? As with the Sea Island Terminal oil spill, the analysis again centers on the concept of military necessity.

The element requiring a "legitimate military objective"

¹⁹⁹. Smith and Richards, Numerous U.S. Bombs Probably Missed Targets, Wash. Post, Feb. 22, 1991 at A25.

²⁰⁰. Murphy, supra note 3 at A13.

²⁰¹. Smith and Richards, supra note 199 at A31.

is easily met in seeking to create smoke to hide military targets from enemy view. But like the oil spill, it is more difficult to meet the second element; that the methods used be capable of being regulated. The direction the smoke blew in was completely dependent upon the direction of the wind. Although it generally blew toward the south, this was subject to change.²⁰²

The actual effectiveness in obscuring targets was also questionable. While there were instances in which attack planes returned from missions without dropping bombs or diverted to secondary targets because of the smoke²⁰³, overall, it had little impact on Coalition military operations.²⁰⁴ The phenomenal speed at which Coalition ground forces were able to advance into Kuwait is another indication of the relative military insignificance of the hindrance caused by the oil well fires.

The Iraqis also clearly failed on the proportionality

²⁰². Murphy, supra note 3 at A13.

²⁰³. Several such instances were reported. Id. See also Atkinson and Claiborne, Iraq Says Retreat Ordered; U.S. Calls Move Insufficient, Wash. Post, Feb. 26, 1991 at A1. See also Atkinson and Devroy, Allies Meet Little Resistance, Capture Thousands of POWs, Wash. Post, Feb. 25, 1991 at A1.

²⁰⁴. Murphy, Allied Forces Invade Kuwait As Bush Orders Ground War Wash. Post, Feb. 24, 1991 at A1. (Quoting allied officials.)

Although smoke obscured almost half of Kuwait to some degree, pilots found that at specific targets the smoke could appear thick at certain angles but be thin enough directly overhead to permit accurate bombing. See Zolton, Carrier Air Stung Saddam with 16,000 Sorties, Navy Times, Mar. 11, 1991 at 36.

element of military necessity. In return for a very marginal and short-term tactical advantage on the battlefield, the Iraqis ignited fires which took ten months to extinguish, causing the loss of \$20 million a day in revenue and spewing toxics and carcinogens into the atmosphere. The long-term economic and health costs are significantly in excess of the military benefits in making targeting marginally more difficult during the few days it took for the Coalition forces to retake Kuwait.

G. The Oil Spill & Oil Well Fires as Vandalism During the Occupation

While there is obviously some argument to be made and facts to support a theory that the Iraqis used the Sea Island Terminal oil spill and the oil well fires as weapons against the Coalition forces, a much stronger case can be made that these were simply acts of vengeance by a brutal occupier. This motivation would be completely consistent with other acts committed by the Iraqis during the occupation. From the early days of the occupation, Iraq permitted extensive pillage of private property by its soldiers, while carrying on its own organized state effort to systematically plunder both private and public property. Stores, businesses, banks, public buildings and even hospitals were picked through, and medical equipment, vehicles, art treasures and other valuables trucked

to Iraq.²⁰⁵

As the Coalition's air campaign progressed and the ground war loomed, the Iraqis turned to vandalize what could not be removed. Hotels, government institutions, public utilities, and oil production facilities were all damaged. The Iraqis even took the time to damage Kuwait City's Planetarium, the Zoo and to blow up one of the five historic gates of the Old City Wall.²⁰⁶ In this greater context, the Sea Island Terminal spill of up to 3 million barrels of oil and the arson of over 500 oil wells appear as additional acts of vengeance heaped on Kuwait.

That Iraq intended the oil release and fires as vandalism is also supported by the fact that President Saddam Hussein had threatened to pollute the Persian Gulf with oil and set the oil wells ablaze months before the January Coalition air campaign began. As noted above, he had threatened to do both of these things shortly after the August invasion. In fact, captured Iraqi military orders to corps commanders issued on January 17th (one day after the Coalition air campaign

²⁰⁵ . J. Whelan, supra note 175. See also Branigan, Kuwait's Treasures Vandalized, Wash. Post, Mar. 6, 1991 at A21.

²⁰⁶ . Branigan, supra note 205. (As an example of the mean-spirited nature of the vandalism, at the century old Sief Palace, home of the Kuwaiti royal family, the Iraqis destroyed a portion of the building facade with gunfire and burned down the wing of the Palace used as the Emir's offices. The library was ransacked, with rare books scattered on the floor amid human defecation, smashed furniture and the remains of small fires that had been set in an unsuccessful attempt to set the whole library ablaze.)

commenced) instructed the commanders to destroy oil fields during the battle with Coalition forces.²⁰⁷ This general plan to vandalize Kuwait's oil resources, irrespective of any military need to do so, became evident when the Iraqis systematically destroyed all Kuwaiti oil facilities within the span of a week.

The term "usufruct" means literally "to use the fruit". As a usufructuary of the Kuwaiti government's crude oil, Iraq was permitted to extract the crude oil from Kuwait's oil wells at the same rate that the Kuwaitis themselves had been extracting it.²⁰⁸ They were then permitted under the usufructory principle to sell the crude oil or process it into petroleum products for its own use. Only when the belligerent occupier extracts fruits from state property in a wasteful or negligent manner, so that the capital value of the property is affected, are its duties as a usufructuary violated.²⁰⁹

Setting fire to oil well heads so that the crude oil feeding them burns uncontrollably is wasteful in itself. But by destroying the control mechanisms that had limited Kuwait's oil production to 2 million barrels a day, the Iraqis have caused the oil to escape the fields at a rate that risks

²⁰⁷. Atkinson and Claiborne, supra note 18 at A1.

²⁰⁸. M. Greenspan, supra note 149 at 288.

²⁰⁹. J. Stone, supra note 172 at 714.

severely damaging them.²¹⁰ The Iraqi destruction of the crude oil dumped in the Persian Gulf and burned at the well heads violated its duty as a usufructuary in occupied Kuwait under the Hague IV Regulations. At the same time, this destruction violated Iraq's duty, under Article 53 of the GC, not to destroy enemy property unless absolutely necessary for military operations.

VIII. The Legality of the Iraqi Oil "Weapon" Under A "Scorched-Earth" Policy

A. Present State of the Law

President Bush, condemning the sabotage of the oil wells and facilities, characterized the Iraqi actions as a "scorched-earth policy".²¹¹ This term usually refers to a policy of general devastation of public and private property employed by an army during a retreat in the face of advancing enemy forces.²¹² The President apparently assumed that a

²¹⁰. Branigan, Kuwait's Environmental, Economic Nightmare, Wash. Post, Mar. 14, 1991 at A35. (As evidence of this danger, some wellheads are spouting white smoke, indicating that underground water which provides the pressure for some reservoirs is being sucked up to the surface along with the crude oil. This will adversely affect the long-term efficiency of the fields.)

²¹¹. Schwartz, etc., supra note 16 at 38.

²¹². G. von Glahn, supra note 149 at 228.

Professor Lauterpacht adds that a scorched-earth policy can also be used to suppress a levy en masse or dispersed small bands of enemy troops in an occupied

scorched-earth policy is per se illegal. In fact, the law of armed conflict continues to recognize the lawfulness of a campaign of general destruction of enemy property under certain circumstances.

A scorched-earth campaign, like any other destruction of enemy property, must meet the requirement of Hague IV Regulations Article 23(g) and GC Article 53. That is, such a campaign must be "imperatively demanded by the necessities of war" or otherwise "rendered absolutely necessary by military operations". Before such a campaign is carried out, there must be no better or less severe way to achieve the operational goal behind the campaign.²¹³

That a scorched-earth policy can still be a lawful tactic was confirmed by the judgment rendered by the United States Military Tribunal at Nuremberg in the case of General Lothar Rendulic.²¹⁴ Pertinent to this discussion among a number of charges against General Rendulic was the allegation that he had committed a war crime by ordering the wanton destruction of private and public property in the province of Finnmark, Norway during the retreat of his 20th Mountain Army. Rendulic

territory. Since such general destruction would cut off vital food and information to such groups, the tactic is considered lawful. See L. Oppenheim, supra note 137 at 415.

²¹³. L. Oppenheim, supra note 137 at 416.

²¹⁴. The Hostage Case (United States v. List, et. al.), (1949), U.S. Mil. Trib. Nuremberg, Trials of War Criminals Before the Nuremberg Military Tribunals Under Control Council Law No.10, XI (1950) (Hereinafter cited as Trials of War Criminals.)

defended his scorched earth policy on the basis of military necessity. In acquitting the defendant on that charge, the Tribunal, after quoting Article 23(g) of the Hague IV Regulations, went on to state:

The destruction of public and private property by retreating military forces which would give aid and comfort to the enemy may constitute a situation coming within the exceptions contained in Article 23(g)... It is our considered opinion that the conditions, as they appeared to the defendant at the time were sufficient upon which he could honestly conclude that urgent military necessity warranted the decision made. This being true, he may have erred in the exercise of his judgment²¹⁵ but he was guilty of no criminal act.

The 1949 Geneva Conventions did nothing to change the law regarding a scorched earth policy. In fact, a delegate

²¹⁵ Id. at 1296-7.

General Rendulic was retreating into Norway under attack from high quality Soviet forces. The scorched earth policy at issue involved evacuation of 43,000 people from Finnmark during the Arctic winter. All domestic animals and other food supplies were removed. German troops destroyed whole villages, as well as communication and transportation facilities. All of this was done to deny the advancing Russian forces critical shelter from the cold (tents being inadequate for this purpose). Removal of the population would also ensure the Soviets would gain no intelligence information on German movements.

Evacuees were permitted to take what baggage they could carry but their dwellings were subsequently destroyed. The Germans provided transportation to all people unable to walk, as well as provisions for temporary shelter, food and medical care. Although the indictment had alleged that hundreds of evacuees died from exposure, the Court found no evidence that anyone had been killed due to the evacuation.
Id. at 1295-6.

A similar decision was made by the Court concerning measures of general devastation taken by certain German generals in Russia. See High Command Trial (William von Leeb et. al.), (1948), Trials of War Criminals, Id. at Vol. VIII.

from the International Committee of the Red Cross specifically pointed out during the drafting process that GC Article 53 would not make such a policy illegal.²¹⁶

B. Iraqi Oil Spill and Oil Well Fires as a Scorched-Earth Tactic

If a scorched-earth policy can under certain circumstances be legal, could the igniting of the oil wells or the spilling of oil in the Gulf by the Iraqis have been justified under this theory? As outlined above, the answer is only if it was militarily necessary to do so. Certainly, if the Iraqis were intending to retreat, they could have lawfully destroyed ammunition, weapons and provisions they could not take with them.²¹⁷ That would logically include any refined petroleum products readily usable as fuel by the advancing Coalition forces. Crude oil in the ground, which with considerable effort and time could eventually become usable by advancing coalition forces, is not analogous to readily usable munitions and provisions.²¹⁸ Crude oil is more analogous to forest timber and coal mines, which historically have been

²¹⁶. G. von Glahn, supra note 149 at 228.

²¹⁷. L. Oppenheim, supra note 137 at 228.

²¹⁸. To a limited extent the Iraqis had used or attempted to use crude oil as a flame weapon. They had placed it in trenches as part of their fixed defensive barriers, and had poured it on roads, in both instances hoping to ignite it when an attack occurred. While such limited uses would qualify crude oil as a "weapon", that is not what is involved in the oil spill or oil well fires.

considered not to be eligible for lawful destruction by retreating forces.²¹⁹

Unlike the Germans under General Rendulic, who were creating an effective barrier in the harsh Arctic winter to deprive pursuing Soviet troops with critical shelter and intelligence, the Iraqis were creating no impediment to advancing Coalition ground forces or maritime forces. In fact, no evidence suggests that the Iraqis were preparing to retreat in the days leading up to the Coalition ground offensive. Given all these considerations, it seems clear that the attacks on the oil wells were acts of vandalism aimed at causing long-lasting damage to the occupied Kuwaiti territory. Such an attack cannot be justified as militarily necessary as part of a scorched earth policy.²²⁰

²¹⁹. L. Oppenheim, supra note 137 at 414. (The German retreat through the Somme area in the spring of 1917 included destruction of these resources and was considered not justified by military necessity.)

²²⁰. M. Greenspan, supra note 149 at 286.

IX. 1925 Geneva Protocol for the Prohibition of the Use in War
of Asphyxiating, Poisonous or Other Gases, and of
Bacteriological Methods²²¹

The 1925 Gas Protocol's broad language in defining what types of weapons it prohibits and the fact that Iraq is a party to it make it worth considering if the oil "weapon" might fall within its restrictions. As will now be developed, crude oil does not fall within the restrictions established in this widely adopted treaty.

A. Provisions and Overview of the Convention

The Protocol prohibits "... the use in war of asphyxiating, poisonous or other gases, and of all analogous liquids, materials or devices... and the use of bacteriological methods of warfare..."²²² Surprisingly, the Protocol itself does not define further the basic operative terms. As a result, much ink has been spilled by international lawyers attempting to further specify the types of weapons prohibited by this treaty. Included among these have been imaginative arguments that the Convention makes illegal the use of nuclear weapons because of the long lasting

²²¹. Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, Jun. 17, 1925, 26 U.S.T. 571, T.I.A.S. 8061, 94 L.N.T.S. 565 [Hereinafter 1925 Gas Protocol].

²²². Id.

and severe effects of radiation.²²³ Even the U.N. General Assembly has sought to define the weapons prohibited, but without legal effect.²²⁴

²²³. A. Roberts and R. Guelff, supra note 147 at 139.

²²⁴. In 1969, the U.N. General assembly further defined these terms. The Resolution states in pertinent part:

The General Assembly,
... Declares as contrary to the generally recognized rules of international law, as embodied in the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925, the use in international armed conflicts of:

(a) Any chemical agents of warfare-chemical substances, whether gaseous, liquid or solid- which might be employed because of their direct toxic effects on man, animals or plants;

(b) Any biological agents of warfare-living organisms, whatever their nature, or infective material derived from them- which are intended to cause disease or death in man, animals or plants, and which depend for their effects on the ability to multiply in the person, animal or plant attacked.

Questions of Chemical and Bacteriological (Biological) Weapons, G.A. Res. 2603A, Dec. 16, 1969, reprinted in D. Djonovich, supra note 159 at Vol. XII, 226.

Although U.N. General Assembly Resolutions do not create international law, they can nonetheless reflect state practice, which is one of the elements in the formation of customary law. In this case, the vote was insufficient to suggest that the Resolution evidences a customary norm.

The vote on the Resolution was 80-3-36. The U.S., Australia and Portugal voted against it. Included among the states voting to abstain were China, France and the U.K. Both the number of abstentions and the almost uniform absence of support among permanent members of the Security Council suggests the Resolution is not reflective of state practice.

B. Application to the Oil Spill and Oil Well Fires

It would be a far stretch indeed to make crude oil out to be either a "chemical" or "biological" weapon. The accepted approach for interpreting a treaty is to apply the ordinary meaning of the terms of the treaty in their context and in the light of the treaty's object and purpose.²²⁵ Chemical and biological agents are man-altered substances. Both are specifically designed for use as weapons. Both are intended to have acute rather than chronic effects on the enemy personnel or area exposed to them. Crude oil meets none of these characteristics: It occurs naturally and is widely used as an energy source. While the use of crude oil-based products results in adverse human health and ecosystem effects, that alone can't reasonably be argued to justify their inclusion among things prohibited by the 1925 Gas Protocol.

²²⁵. Vienna Convention supra note 122 at Art. 31.

X. 1977 United Nations Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques²²⁶

Drafted in response to perceived excesses in the creation of environmental damage by the U.S. during the Vietnam War, the ENMOD Convention prohibits the use of environmental modification techniques in warfare. A number of international law and environmental law attorneys have leapt to the conclusion that the Iraq's oil weapon constituted such a technique and that Iraq, as a signatory to the Convention, had violated its restrictions.²²⁷ In fact, a more careful analysis will demonstrate that the ENMOD Convention does not apply to the Sea Island Terminal oil release or the oil well fires.

A. Provisions & Interpretation

The ENMOD Treaty was negotiated under the auspices of the Conference of the Committee on Disarmament with all 30 member states participating. In 1976 a revised text of the proposed Convention was transmitted to the U.N. General Assembly along

²²⁶. Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, May 18, 1977, 31 U.S.T. 333, T.I.A.S. 9614, 1108 U.N.T.S. 151 [Hereinafter ENMOD Convention].

²²⁷. Among them were Joel Burcat, general counsel, National Wildlife Institute. See SORE, supra note 192.

with a set of Understandings.²²⁸ At the heart of the Convention are the following provisions:

Article I: 1. Each State Party to this Convention undertakes not to engage in military or any other hostile use of environmental modification techniques having widespread, long-lasting or severe effects as the means of destruction, damage or injury to any other state party.

Article II: As used in Article I, the term 'environmental modification techniques' refers to any technique for changing- through the deliberate manipulation of natural processes- the dynamics, composition or structure of the Earth, including its biota, lithosphere, hydrosphere and atmosphere, or of outer space.²²⁹

The Understandings which accompanied the final draft of the ENMOD Convention are critical in applying the Convention to the oil spill and oil well fires. There are several reasons for this.

First, they clarify the operative terms "widespread", "long-lasting" and "severe", making it clear that in order for an environmental modification technique to be prohibited, its effects must last several months, cover several hundred square kilometers and cause serious or significant disruption or harm

²²⁸. A. Roberts and R. Guelff, supra note 147 at 379.

²²⁹. ENMOD Convention, supra note 226 at Art. I(1) and Art. II.

to human life or natural or economic resources.²³⁰

Second, the Understandings explain that the above terms are defined exclusively for the purpose of understanding the ENMOD Convention. This point is important because it highlights the fact that the drafters recognized there was a fundamental difference in purpose between the ENMOD Convention and the 1977 Geneva Protocol I provisions being negotiated during the same period. Protocol I also contained provisions regarding the environment in an armed conflict.²³¹ The drafters were aware that the ENMOD Convention was concerned with a party using the Earth's natural forces as weapons whereas the 1977 Geneva Protocol had the broader purpose of limiting damage to the environment in an armed conflict, regardless of the weapon used.

Third, the Understandings help clarify the object and purpose of the Convention by providing a non-exhaustive list of phenomena qualifying as "dynamics, composition or structure of the Earth", which the drafters felt could result from manipulating the forces of the environment.²³²

²³⁰. 1976 Understandings Related to Article I of the Environmental Convention, Special Report on the Question of a Convention to Prohibit Environmental Warfare, 31 U.N. GAOR, Supp. (No. 27) 61, U.N. Doc. A/31/27 (1976) redacted in A. Roberts and R. Guelff, supra note 147 at 377.)

²³¹. A. Roberts and R. Guelff, supra note 147 at 378. (The 1977 Geneva Protocol I also uses the terms "widespread", "long-lasting" and "severe".)

²³². Id. (Those listed were: earthquakes, tsunamis, an upset in the ecological balance of a region, changes in weather patterns (clouds, precipitation, cyclones of various

B. Application to the Oil Spill & Oil Well Fires

A study of the operative phrases of the Convention in light of the Understandings of the drafters shows that the object and purpose of the Convention was to prohibit the turning of one of Earth's natural processes into a destructive force to be used against another Party. The ENMOD Convention therefore does not provide general protection of the environment from damage during armed conflict.²³³ If it can be accepted that the Iraqis intended to use the oil spill during hostile military operations as outlined above, then it is true that the Gulf currents were used to transport the crude oil toward the intended beach and desalinization plant targets. Similarly, if it can be said that the Iraqis intended the setting of oil well fires to provide smoke cover for its military forces, it is also true that the Iraqis relied on the natural force of the wind to blow the resulting smoke over its forces.

These limited uses can't reasonably be said to be what the drafters of the Convention meant by "environmental

types, and tornadic storms), changes in climate patterns, changes in ocean current, changes in the state of the ozone layer, and changes in the state of the ionosphere.)

233. One aspect of this limited protection is the extent of the environment covered. Article I specifies that the destruction, damage or injury covered extends only to areas within the jurisdiction of other state parties. Damage done by environmental modification techniques to the environment in areas such as the high seas and all areas under the jurisdiction of non-parties is not prohibited by the Convention.

modification techniques" since they are not intended to change the "dynamics, composition or structure of the earth". The Iraqis weren't changing the ocean currents or the wind. They were only using them as a means of transport in delivering their oil "weapon".²³⁴

It is true that if the Sea Island Terminal oil spill is an environmental modification technique, then the resulting damage falls within one of the qualifying phenomena as "an upset in the ecological balance". Theoretically, the smoke resulting from the oil well fires could have changed the weather and climate patterns in Asia, thereby falling within that qualifying phenomena.²³⁵ But the ENMOD Convention prohibits only use of natural processes as a weapon, and not

²³⁴. The oil well fires do appear to be altering the weather, at least locally within Kuwait. The tremendous heat generated from the fires has created fierce winds at the edge of the oil fields. Measurements taken by the Kuwaitis in May, 1991 and compared to measurements taken 12 months earlier show a 30% decrease in solar radiation, a 40% decrease in ultraviolet light and a 20% increase in humidity. The soot from the fires may also be seeding the skies and forming rain clouds. See Booth, Kuwait May Evacuate Smoke-Filled Areas, Wash. Post, May 21, 1991 at A12.

If these effects turn out to be widespread, lasting and severe, they probably constitute "dynamics, composition or structure of the earth" as referred to in Article II since they are arguably "changes in weather and climate patterns" as mentioned in the definition provided in the Understandings. Nonetheless, the Convention only prohibits changing the dynamics, composition or structure of the earth through the deliberate manipulation of natural processes. The igniting of oil wells is not an environmental modification technique because it is not a technique which involves the deliberate manipulation of a natural process. Oil extraction is not a natural process nor is the ignition of the oil being extracted.

²³⁵. Infra note 232.

environmental damage in general.²³⁶ Indeed, if the ENMOD Convention's purpose was to provide general protection of the environment, why were the extensive environmental provisions placed in the 1977 Geneva Protocol I? Such provisions would have only been redundant. The ENMOD Convention, by its own terms, does not apply to the Iraqi oil spill or oil well sabotage.

C. Extent To Which Iraq Is Bound By the Convention

Even if the terms of the ENMOD Convention could be said to apply to the Iraqi actions, there remains the issue of whether Iraq is bound by the Convention. Although Iraq signed the Convention in 1977 and the Convention entered into force in 1979, Iraq has never become a party to it. Unless a treaty reflects some international customary norm, it creates law for the contracting parties only.²³⁷ Hence, it cannot be enforced against states who do not become a party to it.²³⁸ A state choosing to sign a treaty is not bound to become a party to that treaty, and may withhold ratification for any reason.²³⁹ Iraq was therefore not bound by the ENMOD Convention, when it

²³⁶. Almond, Weapons, War and the Environment, 3 Geo. Envtl. L. Rev. 149 (1990).

²³⁷. L. Oppenheim, supra note 137 at 28.

²³⁸. C. Rhyne, International Law 49 (1971).

²³⁹. Rogoff, supra note 124 at 267.

chose to spill crude oil in the Gulf and to set fire to Kuwait's oil wells.

Iraq was under the customary international law obligation not to defeat the object and purpose of a treaty which it has signed or ratified but which has not yet entered into force.²⁴⁰ Those who argue that the ENMOD Convention applies to the oil spill and oil well fires also argue that Iraq has therefore violated its duty as a signatory state. That argument ignores the limited nature of the duty, which is only to refrain from acts which would make it impossible to comply with the provisions of the treaty once it enters into force. While reprehensible, Iraq's conduct in polluting the Gulf with crude oil and setting fire to Kuwait's oil wells will not prevent it from later ratifying the ENMOD Convention and thereafter refraining from using environmental modification techniques for hostile purposes.

It should also be mentioned that the ENMOD Treaty does not reflect any customary international law norms. It was new law when it opened for signature in 1976 and by 1990 had 54 parties to it.²⁴¹ The absence of some of the major military powers and lack of widespread support for the Convention are indications that it has not yet achieved customary law status

²⁴⁰. See the discussion of this norm in subsection IV(A)(4)(a) of this paper at page 42.

²⁴¹. Kuwait, the U.S., the U.K., and the U.S.S.R. are all parties to it. Iraq(though a signatory since 1977), Saudi Arabia, Iran, France and China are not parties.

and could not be applied to Iraq even if its substance could be said to do so.²⁴²

XI. Conclusions Regarding Iraqi Liability Under the Law of Armed Conflict

The spilling of a large quantity of crude oil in the Persian Gulf and the igniting of over 500 oil well fires by Iraq were violations of the international law of armed conflict. These acts violated customary international law as evidenced by Articles 23(g) and Art. 55 of the Hague IV Regulations. These acts also violated Iraq's duty as a party to the GC not to destroy public property absent military necessity. Inasmuch as the GC has itself now become customary international law, Iraq would have been bound to comply regardless of its status as a party. However, as is so often the case in international law, the conclusion of state responsibility for violations of treaties and customary norms brings only the possibility of a legal beginning.

Part Three: Considerations for Enforcing International Law With Regard to the Iraqi Oil "Weapon"

²⁴². North Sea Cases, supra note 73.

XII. Holding Iraq Accountable

A. Keeping a Sense of Perspective

What should be done about Iraq's violations? A good place to start in answering this question is to consider the extent of air and water pollution currently tolerated within the world community. In truth, despite a growing acknowledgment of the negative consequences, most nations permit extensive pollution to occur within their borders, often with significant adverse consequences to other states. A comparison between what the world community permits to occur in peacetime and what Iraq has been responsible for in the 1991 Gulf War is instructive in assessing the propriety of specific remedies.

Globally, one-fifth of the world's population breathes air containing more pollutants than recommended by the World Health Organization.²⁴³ In the United States, despite twenty years of increasingly restrictive federal pollution control legislation, Americans still intentionally release over 134 million tons of pollutants into the air each year.²⁴⁴ By one estimate, had the Kuwaiti oil well fires burned for a year, they would have released only 26 million tons of air

²⁴³. J. Morris, Environment: Major Concerns, 1991 Britannica Book of the Year 193 (1991).

²⁴⁴. Council on Environmental Quality, Environmental Quality, 21st Annual Report, Table 39, pg. 322. (This figure measures only the six criteria pollutants.)

pollutants.²⁴⁵ From an environmental perspective, there is no difference between a ton of sulfur dioxide released legally into the air from commuter vehicles in Washington D.C. and a ton released as a result of Iraq's illegal damage to the Kuwaiti oil fields. The resulting damage to the world ecosystem is the same.

In the United States, the E.P.A. estimates that Americans intentionally dump 5 to 7 million barrels of used motor oil from do-it-yourself automotive oil changes into the ground or sewer systems in a year.²⁴⁶ The Iraqi intentional oil spill at Sea Island Terminal of up to 3 million barrels seems moderate in comparison.

Many nations are responsible for trans-boundary pollution that adversely effects the territory of other nations. The U.S. has for decades sent acid rain to Canada from large electric utility plants in the Mid-West. The Soviet Union has yet to accept responsibility for the damage caused in Europe from radiation released at Chernobyl in 1986. Brazil has for years ignored the massive deforestation of the Amazon with its impact on global warming. While Iraq's unnecessary destruction of Kuwaiti oil resources needs to be condemned by the world community, this should be done with a sober understanding of the long-standing state practice of

²⁴⁵. Weisskopf, supra note 13 at A25.

²⁴⁶. J. Nolan, Regulating Recycled Used Oil: EPA's Mission Impossible, The Environmental Forum, July/August 1989 at 15.)

environmental degradation both within national borders and across them.²⁴⁷

In fashioning an appropriate international law response to Iraq's illegal oil spill and oil well sabotage, consideration also needs to be given to the seriousness of these violations relative to the other breaches committed by Iraq in its invasion of Kuwait. The invasion itself is a clear crime against peace.²⁴⁸ It was subsequently followed

²⁴⁷. One author has nonetheless argued that a consensus regarding environmental protection has emerged among the states of the world community. In support of this assertion, he cites the domestic environmental activities of the U.S. and the U.S.S.R. as evidence of a general practice against polluting the environment. See Schafer, The Relationship Between the International Law of Armed Conflict and Environmental Protection: The Need to Reevaluate What Types of Conduct Are Permissible During Hostilities, 19 Cal. W. Int'l L.J. 291-6 (1989).

While there has been a movement for states to promise environmental protection in a number of treaties and conferences, action to effect these promises has largely yet to emerge. In light of numerous accounts of environmental degradation in Eastern Europe and the Soviet Union, MAJ Shafer's enthusiastic reference to the U.S.S.R.'s creation of some of the strictest environmental laws in the world as proof of concern for the environment is remarkable. See Mathews, The Union of Soviet Socialist Pollution, Wash. Post, Apr. 12, 1991 at A16. See also Meyer, Pullout of the Barbarians, Newsweek, June 10, 1991 at 36. (The Czechoslovakians calculate the Soviets have done \$70 million worth of environmental damage to their country during the course of their military occupation, through indiscriminate dumping of fuel and hazardous waste.)

²⁴⁸. The Charter of the Nuremberg Tribunal stated in pertinent part:

The following acts, or any of them, are crimes coming within the jurisdiction of the Tribunal for which there shall be individual responsibility:

(a) Crimes Against Peace: namely, planning, preparation, initiation, or

by brutally excessive measures to repress the underground resistance movement including torture and punishment without trial in violation of the GC. The Iraqi government organized a thorough program for seizing both public and private property for removal to Iraq in violation of the GC. It also failed to enforce laws against pillage resulting in widespread abuses by individual Iraqi soldiers. The intentional targeting of population centers with Scud missiles, and use of treacherous ruses involving feigned surrender were also regular occurrences.

Beyond Iraq's immediate behavior during the war itself is a record of systematic atrocities committed against its own rebellious Kurdish minority.²⁴⁹ It is sobering to note that despite the supposed universal nature of the crime of genocide under international law, no strong movement has emerged in the United Nations or elsewhere to pursue prosecution of those

waging of a war of aggression, or a war in violation of international treaties, agreements, or assurances, or participation in a common plan or conspiracy for the accomplishments of the foregoing...

Charter of the Nuremberg Tribunal,
Agreement for the Prosecution and
Punishment of Major War Criminals of the
European Axis (London Charter), Aug. 8,
1945, 82 U.N.T.S. 279.

²⁴⁹. See Nordland, Saddam's Secret War, June 10, 1991, Newsweek at 28. (The author outlines the growing body of evidence that the Iraqis destroyed at least 3,000 Kurdish villages between 1988 and 1990. The destruction of each village was typically preceded by chemical bombing and sometimes followed by the rounding up of adult male survivors, none of whom would ever be seen again.)

Iraqis responsible.²⁵⁰ Considering the widespread human suffering perpetrated by the Iraqis on Kuwait, the damage done to the environment, while illegal and reprehensible, is of lesser significance. Priority should reasonably be given to ensure that a precedent under international law is first established to hold Iraq accountable for the human suffering.

B. Fashioning an Appropriate International Law Remedy

Once a war has been concluded, three methods remain available to enforce the laws of armed conflict: 1) prosecution of suspected war criminals by international courts or by national courts other than those of the offending state; 2) protests to the offending state coupled with a demand for prosecution of those persons suspected; or 3) protests to the offending state coupled with a demand for compensation for the injuries suffered. Although after the fact, such efforts are necessary to validate and affirm the commitment of nations to the agreed-upon laws of armed conflict. For the reasons outlined below, the best and most practical approach to the numerous Iraqi violations (including the oil "weapon") would be the payment of reparations by Iraq tied to a statement

²⁵⁰. See Convention on the Prevention and Punishment of the Crime of Genocide, Dec. 11, 1948, 78 U.N.T.S. 277. (As of 1990, there were 99 states who were parties to the Convention, which makes it a crime to kill, seriously injure or inflict conditions of life upon members of an ethnic group with intent to destroy them in whole or in part.)

acknowledging responsibility for the violations.

The U.S. and its Coalition partners wisely chose not to continue hostilities in order to occupy all of Iraq. At the same time, the Iraqi people were subsequently unable and perhaps unwilling to end the government of President Saddam Hussein and his Baath Party. As a result of these two events, the government responsible for most of the war crimes committed remains in power. Given that reality, the war crimes trials option has little chance of success.

1. The War Crimes Trials Option

a. Background

Although a complete survey of the history of the use of war crimes trials is unnecessary for the purposes of this paper, a brief overview is helpful in understanding some of the limitations involved with them.²⁵¹ Enforcement of the laws of armed conflict by criminalizing violations was rare prior to the First World War. When trials were held, they were almost exclusively by means of national courts rather

²⁵¹. For a thorough review of war crimes penal clauses in treaties as well as the trials emerging from World War II, see Sandoz, Penal Aspects of International Humanitarian Law in 1 International Criminal Law 209 (M. Bassiouni ed., 1986).

than an international criminal justice system.²⁵² Although the belligerents concluded at the end of World War I that the Kaiser would be prosecuted for war crimes by an international tribunal and that Germany would hand over for trial by Allied military tribunals service men accused of war crimes, neither of these prosecutions actually took place.²⁵³ Having the advantage of achieving total victory over the Axis powers at the end of World War II, the Allies prosecuted suspected Axis war criminals both in international trials (the International Tribunals at Nuremberg and Tokyo) and in national trials using military tribunals in their respective zones of occupation.²⁵⁴ The thousands of trials held under this system established a clear precedent for prosecuting war criminals before either national or international courts.

b. Prosecution Under the 1949 Geneva Conventions

The four Geneva Conventions concluded in 1949 established

²⁵². Bassiouni, Repression of Breaches of the Geneva Conventions Under the Draft Additional Protocol to the Geneva Conventions of August 12, 1949, 8 Rut.-Cam. L.J. 189 (1977).

²⁵³. Id. at 190. (The Kaiser fled to the Netherlands, which subsequently refused extradition based upon the political offense exception. The Allies initially identified 896 suspected war criminals, but eventually agreed to permit Germany to conduct the trials and insisted on the prosecution of only 45 individuals. Germany actually tried 12, with the six convicted receiving only nominal sentences.)

²⁵⁴. Id. at 191-2.

for the first time in an international agreement an enforcement scheme that criminalized individual behavior that violated the laws of armed conflict.²⁵⁵ Entering into force in 1950, by 1990 the 1949 Geneva Conventions had 166 nations as parties to them. Common to all four Conventions are articles regarding the repression of violations of the treaties. Since the Iraqi violations discussed in this paper were of the GC only, reference will henceforth be only to the pertinent articles contained in the GC.

The GC adopts an indirect enforcement scheme in the prosecution of those suspected of violating its provisions. It commits each Party to enact national criminal laws against violating those of its provisions enumerated as grave breaches.²⁵⁶ Implied in this obligation is that such laws

²⁵⁵. The four Geneva Conventions of August 12, 1949 are: Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field, 6 U.S.T. 3114, T.I.A.S. No.3362, 75 U.N.T.S. 31; Convention for the Amelioration of the Condition of Wounded, Sick and Shipwrecked Members of Armed Forces at Sea, 6 U.S.T. 3217, T.I.A.S. No.3363, 75 U.N.T.S. 85; Convention Relative to the Treatment of Prisoners of War, 6 U.S.T. 3316, T.I.A.S. No. 3364, 75 U.N.T.S. 135 [Hereinafter GPW]; GC, supra note 148.

²⁵⁶. Article 146 states:

The High Contracting Parties undertake to enact any legislation necessary to provide effective penal sanctions for persons committing, or ordering to be committed, any of the grave breaches of the present Convention defined in the following Article.

Each High Contracting Party shall be under an obligation to search for persons alleged to have committed, or to have ordered to be committed, such grave

will extend to any person, including non-nationals of the enacting state, who commits a grave breach.²⁵⁷ Each party is also then committed to search for persons suspected of grave breaches and thereafter to either prosecute them in its own courts or extradite them to another Party state for trial.²⁵⁸ While the GC provides only for prosecutions in national courts, grave breaches are international crimes and are also punishable by an international criminal court.²⁵⁹ It is therefore permissible for a Party to the GC to hand over a

breaches, and shall bring such persons, regardless of their nationality, before its own courts. It may also, if it prefers, and in accordance with the provisions of its own legislation, hand such persons over for trial to another High Contracting Party concerned, provided such High Contracting Party has made out a *prima facia* case.

Each High Contracting Party shall take measures necessary for the suppression of all acts contrary to the provisions of the present Convention other than the grave breaches defined in the following Article.

In all circumstances, the accused persons shall benefit by safeguards of proper trial and defence, which shall not be less favorable than those provided by Article 105 and those following of the Geneva Convention relative to the Treatment of Prisoners of War of August 12, 1949.

GC, supra note 148 at Art. 147.

²⁵⁷. J. Pictet, O. Uhler, H. Coursier, F. Siordet, C. Pilloud, R. Boppe, R.-J. Wilhelm, J.-P. Schoenholzer, Commentary IV Geneva Convention Relative to the Protection of Civilian Persons in Time of War (1958) [Hereinafter Pictet].

²⁵⁸. GC, Art. 146(2) infra at note 256.

²⁵⁹. Bassiouni, supra note 252 at 196.

person suspected of committing a grave breach to an international criminal court whose competence has been recognized by the Parties.²⁶⁰

It should be noted that while the Parties are obliged to suppress all violations of the GC, they are only obligated to search for and either extradite or prosecute those suspected of committing grave breaches.²⁶¹ While violations of the GC not falling among the enumerated grave breaches may be suppressed by Parties through their criminal courts, they are not considered international crimes.²⁶² It should also be noted that many war crimes do not violate the 1949 Geneva Conventions at all, but nonetheless are serious crimes under customary law. Such crimes would be punishable solely through national courts.²⁶³

Since much of the application of the GC enforcement provisions depends upon whether or not a violation falls within the category of grave breaches, application of the GC enforcement provisions to the Iraqi oil spill and oil well fires first requires a determination of whether or not these constituted grave breaches. Of the grave breaches enumerated

²⁶⁰. Pictet, supra note 257 at 593.

²⁶¹. GC, Art. 146(2)(3) infra note 256.

²⁶². Bassiouni, supra note 252 at 196. See also Sandoz, supra note 250 at 225.

²⁶³. Murphy, Sanctions and Enforcement of the Humanitarian Law of the Four Geneva Conventions of 1949 and Geneva Protocol of 1977, 103 Mil. L. Rev. 43 (1984).

by the GC, the oil spill and oil well fires fall within the category of "...acts... committed against...property protected by the present Convention:...extensive destruction and appropriation of property, not justified by military necessity and carried out unlawfully and wantonly."²⁶⁴ As was concluded earlier, GC Art. 53 protected Kuwaiti oil (owned by the Kuwaiti state) and Kuwaiti and Saudi Arabian coastal and territorial sea property affected by that oil from destruction by the Iraqis unless the destruction was rendered absolutely necessary by military operations.²⁶⁵ This is the starting point for considering the numerous difficulties which will be encountered in an attempt to hold war crimes trials.

The meaning of the adjectives "extensive", "unlawful" and "wanton" are first of all open to debate. While they reasonably should apply to the loss of the millions of barrels of oil poured into the Gulf and burned at the well head and the loss of marine life and wildlife in coastal and territorial sea areas, Iraq may well argue that they don't and that no grave breaches have therefore occurred. The argument, if successful, would then relieve Iraq of almost all its duties under the GC. It would not be required to seek out

²⁶⁴. GC, supra note 148 at Art. 147.

²⁶⁵. Infra at note 151.

The oil released from the tankers at Mina al Ahmadi was Iraq's own property. As such, they were free to destroy it if they wished. However, the damage resulting from its release to Kuwaiti and Saudi property violates GC Art. 53. See infra at VII(E), page 68. Prosecution solely under the concept of military necessity would be unprecedented.

those who destroyed or ordered the destruction of the oil at Sea Island Terminal and at the oil wells, nor would it be required to either prosecute or extradite them.

Secondly, although the U.S. had a war crimes documentation team in place early on in the conflict, it is probable that the Coalition has not identified all those responsible for destroying and ordering the destruction of the Kuwaiti oil.²⁶⁶ While Coalition nations might at first appear to be able to use the mandatory inquiry provision of the GC to identify those responsible, a closer reading makes it clear that Iraq would be able to block such a process.²⁶⁷

The GC specifies that the procedure for conducting the enquiry must first be agreed upon between Iraq and the

²⁶⁶. The Coalition is apparently in possession of written orders to Iraqi Corps commanders instructing them on January 17, 1991 to destroy the oil fields in the event of a ground war. See Atkinson and Claiborne, supra note 18.

Still, while higher officials may be easily identifiable, identifying and locating the individual Iraqi engineers responsible for exploding the wells and releasing the oil will be much more difficult. See Isikoff, U.S. Prepares for Possible War Crimes Trials, Wash. Post, Feb. 12, 1991 at A10.

²⁶⁷. The GC states in pertinent part:

At the request of a Party to the Conflict, an enquiry shall be instituted, in a manner to be decided between the interested Parties, concerning any alleged violation of the Convention.

If agreement has not been reached concerning the procedure for the enquiry, the Parties should agree on the choice of an umpire who will decide upon the procedure to be followed.

GC, supra note 148 at Art. 149.

requesting party. While the Convention goes on to provide that an umpire will decide upon the procedure in the event the parties are unable to agree, it does not specify who will act as umpire nor what is to happen if the parties can't mutually agree upon one. Even if an enquiry were undertaken, Iraq would have ample time to destroy or even fabricate evidence in order to protect many of those responsible.

Thirdly, Iraq might choose to concede the point that the oil well fires and oil release were grave breaches. It would still be free to follow Germany's example after World War I, wearing down the Allies over time, delaying the prosecution of those responsible and eventually holding only a token number of trials resulting in acquittal or nominal punishment. After all, the GC requires only that Iraq bring persons suspected of grave breaches "before its own courts", with no specific obligation to vigorously prosecute them.

Fourth, as Professor Howard Levie recently reminded an audience at an ABA-sponsored seminar on international law and the 1991 Gulf War, "Before you can make rabbit stew, you have to catch a rabbit". If other nations demand that Iraq fulfill its obligation to extradite war crimes suspects it chooses not to prosecute, Iraq may easily find legal arguments to justify a decision not to do so. The GC requires Iraq to extradite suspects to another Party state requesting it only "in accordance with the provisions of its own legislation..." and "provided such High Contracting Party has made out a prima

facie case".²⁶⁸ Iraq may easily claim that the requesting state has failed to make out a prima facia case against the Iraqi suspect sought for extradition. In addition, depending upon the requesting state involved, Iraq might refuse extradition based upon a lack of an extradition treaty, the political nature of the crime or for other reasons.²⁶⁹

Even when an extradition treaty is in existence, there may be several impediments built into the treaty itself. In the case of the extradition treaty between Iraq and the U.S. for example, the political crimes exception is included.²⁷⁰ There is also a requirement that the suspect must have committed a crime specifically enumerated in the treaty.²⁷¹ The enumerated crimes do not include violations of international law or the destruction of public property.²⁷² Finally, the U.S.-Iraq extradition treaty, like most such treaties, specifies that neither party is bound to deliver up

²⁶⁸. GC, Art. 146 infra at note 256.

²⁶⁹. Van Den Wijngaert, War Crimes, Crimes Against Humanity and Statutory Limitations, in 3 International Criminal Law 93 (M. Bassiouni ed., 1986).

²⁷⁰. Extradition Treaty Between the United States of America and the Kingdom of Iraq, Jun. 7, 1934, 49 Stat. 3380, 170 L.N.T.S. 267 at Art. I.

²⁷¹. Id. at Art. II(5).

²⁷². The crimes listed do include arson, which arguably may be said to involve the exploding of the Kuwaiti oil wells. Id. at Art. II(5).

its own citizens.²⁷³

Some have called upon the U.S. to put pressure upon Iraq to agree to extradite those suspected of war crimes. Unsatisfied with the ambitious reparations plan adopted by the Security Council, it had been suggested that if only the U.S. really wanted to, it could somehow persuade Iraq to turn over members of its own ruling elite for trial by the U.S.²⁷⁴ Yet such persuasion would only effectively come at gunpoint, and it would not be worth the additional American and other lives lost in the ensuing "rabbit hunt" across Iraq. The Security Council got as much as it possibly could from the Iraqis when it got them to agree in principle to accept liability under international law for reparations and by setting in place an historic mechanism to achieve that agreement. After all, it is one thing for Iraq to agree to pay a portion of future oil dollars to its victims, but it is entirely another to expect it turn over members of its own ruling elite for criminal trial.

Although beyond the focus of this paper, there are numerous foreign policy reasons for not pursuing war crimes trials against Iraqis responsible for the oil well fires and oil spill. These include reigniting the hatred of the

²⁷³. Id. at Art. VIII. See also Pictet, supra note 256 at 593. (The Commentary suggests hopefully that given this fact, the requested state is bound to prosecute the suspect itself if it chooses to rely upon this provision.)

²⁷⁴. Green, Thugs Who Sack Kuwait Deserve Harsh Penalties, L.A. Daily Journal, Mar. 26, 1991 at 6.

already sympathetic Arab masses throughout the Middle East and parts of Africa, and providing the Iraqis with a forum for a propaganda campaign to rewrite the history of the war. Given the tremendous hurdles involved in bringing war crime suspects to trial, it would be a better precedent to simply leave the issue open then to try and fail, as was done in World War I.²⁷⁵ But what if the U.S. were able to bring some of those responsible to trial? Would the results necessarily be a foregone conclusion?

c. Procedural Difficulties in War Crimes Trials

The GC requires that persons accused of violations of the Convention be afforded the safeguards of a proper trial and

²⁷⁵ . U.S. Secretary of State Baker has suggested that Saudi Arabia and Kuwait would "be best equipped to take the lead" in prosecuting war criminals. They have in custody some individual who are suspected of war crimes, and would have the best access, short of Iraq itself, to evidence concerning the oil well fires and oil spill. See Hoffman, U.S.: No Plans to Try Saddam In Absentia, Wash. Post, Apr. 24, 1991 at A23.

Still, Kuwait was internationally discredited from playing this role after holding a number of trials of alleged Iraqi collaborators under martial law. The accused were not permitted to see their counsel before trial, and counsel were not permitted to cross-examine witnesses or even see the evidence or charges in the case. See Hoffman, Bush Urges Kuwait to Ensure Fair Trials, Wash. Post, May 21, 1991 at A1.

Given this experience, it is probably better for the development of international law that no trials take place than to hold some that would quickly be labeled as "victor's justice".

Ironically, failure to afford a person protected under the 1949 Geneva Conventions with a fair and regular trial is itself a grave breach of the Conventions. See GC, supra note 148 at Art. 147.

defense, which it defines as including the procedural protections laid out for prisoners of war in the GPW who are tried for violations of the laws of the detaining ration during his or her captivity.²⁷⁶ Those protections include an opportunity to present a defense, the assistance of a qualified counsel, and the right to call witnesses.²⁷⁷

Most significant for Iraqi servicemen captured during the war and tried for war crimes is a provision that requires they be tried in the same courts as the detaining state's service personnel and afforded the same procedural rights.²⁷⁸ This is significant were the U.S. to try such service personnel because it most probably requires that trial be by general courts-martial, with its full array of procedural rights, including the application of the rules of evidence. The availability of the hearsay rule alone would cause the government considerable trouble in mustering witnesses and limiting its use of documentary evidence.²⁷⁹

²⁷⁶. GC, Art. 146 infra note 256.

²⁷⁷. GPW, supra note 255 at Art. 99.

²⁷⁸. Id. at Art. 102. See also Dept. of the Army, FM 27-10 The Law of Land Warfare 69 (1956).

²⁷⁹. Under Articles 18 and 21 of the Uniform Code of Military Justice (18 U.S.C. 818, 821), U.S. service personnel and any other person who by the laws of war are subject to trial may be tried by either general court-martial or by military tribunals (such as military commissions and provost courts). However, military tribunals have only been used during occupations of belligerent territory, when other courts are not open or functioning. See Law of Naval Operations, supra note 55 at 6-38. See also U.S. Marine Corps, Deskbook-Law of War Course VIII-2 (1984). Given that the U.S. no

preserve the Iraqi President in power longer.²⁸¹ In addition to the obvious political problems, such trials could be roundly criticized for lacking the procedural safeguards provided for by the GC.

d. Conclusion Regarding the War Crimes Trial Option

Although highly attractive to legal theorists and politicians, war crimes trials in light of the decision not to press for total victory over Iraq are simply not achievable. Perhaps most telling about the war crimes trial enforcement mechanism embodied in the 1949 Geneva Conventions is that it has never been used in over forty years since the Conventions were signed.²⁸² This despite numerous conflicts in which the Conventions should have applied.²⁸³ Even the International Committee of the Red Cross has admitted that the system never

²⁸¹. Hoffman, supra note 275 at A23.

²⁸². Law of Naval Operations, supra note 55 at 6-37. (While the U.S. and some others occasionally conduct prosecutions for violations of the law of armed conflict, these have been trials of their own forces for breaches of military discipline rather than under the Geneva Convention enforcement scheme.)

²⁸³. Professor Bassiouni includes among these the Korean Conflict, the Algerian War of Independence, the Indo-China War of Independence, the Biafran Succession, the Vietnam Conflict, the Arab-Israeli Wars and the Bangladesh Successions. See Bassiouni, supra note 252 at 194 n.70.

To these I would add the Libya-Chad War, the Iran-Iraq War, the Falklands/Malvinas War, the Grenada Conflict, the Panama Conflict, and now the 1991 Persian Gulf War.

Even if the extraordinary decision were to be made to try suspected Iraqi war criminals by military tribunal, the President has signaled a preference to operate these in such a manner as to afford the accused the same procedural protections provided by courts-martial.²⁸⁰ Whatever the final choice of forum, as the government found in the My Lai massacre cases, martialling witnesses and other evidence from a battlefield half a world away can be an almost insurmountable task.

Some have suggested that suspected Iraqi war criminals, particularly President Saddam Hussein, be tried in absentia. Of course, with no opposing party to object, the burden of producing evidence at such trials would be considerably reduced. Yet, such trials would be readily seen more as a media event staged to discredit Saddam than as a serious effort to enforce the laws of armed conflict. Such trials would only reenforce the perception of the impotence of international law in this area. The U.S. has come out against such an effort, concluding that it might actually help

longer occupies Iraqi territory in a belligerent capacity, military tribunals would not be authorized.

²⁸⁰. The Manual for Courts-Martial, prescribed by the President, states in pertinent part: "Subject to any applicable rule of international law or to any regulations prescribed by the President or by other competent authority, military commissions and provost courts shall be guided by the appropriate principles of law and rules of procedure and evidence prescribed for courts-martial." See Manual for Courts-Martial, United States, 1984, at Part I:Preamble, (2)(b)(2).

worked.²⁸⁴ While sounding good in sound-bites and op-ed articles, the war crimes trials option has wisely been left open but as of yet unused.²⁸⁵

2. The Reparations Option

a. Background

Reparations are payments (usually in money) made by a losing belligerent nation to a victorious one. They have historically served two purposes. First, reparations may be compensation paid in recognition of the losing state's responsibility for causing the war. This was the case for Germany at the end of World Wars I and II. But reparations may also be payments made for violating the laws of armed conflict as well as international environmental law.²⁸⁶

The idea to use money damages as an enforcement mechanism against nations which violated the laws of armed conflict was first incorporated into the Hague IV Convention. Up until then, the assumption had simply been that nations, like

²⁸⁴. Van Den Wijngaert, supra note 269 at 90.

²⁸⁵. Not least of the political reasons that war crimes trials will not be held is the glass-house problem. There have been consistent reports that Kuwaiti troops violated the laws of armed conflict. See Navy Probes Alleged Shooting of Surrendering Iraqi Troops, Wash. Post, June 12, 1991 at A29.

²⁸⁶. Sandoz, Unlawful Damage in Armed Conflicts and Redress Under International Humanitarian Law, 228 Int'l Rev. Red Cross 131, 143 (1982).

gentlemen, always kept their promises, and that pledges made in international treaties would be honored without the need for any threat of sanctions for noncompliance.²⁸⁷ The Convention provided that "A belligerent party which violates the provisions of the said Regulations shall, if the case demands, be liable to pay compensation. It shall be responsible for all acts committed by persons forming part of its armed forces."²⁸⁸ The provision was included, explained the German delegate who proposed it, not because of any sudden doubts about the good faith of governments, but because compliance depended upon the behavior of the men in the armed forces who would be engaged in a dangerous, intensely violent struggle for life itself. Under these circumstances, it was reasonable to assume that some violations would occur and that some mechanism was needed to address these. Victims of violations should logically be indemnified for their injury, just as in civil law, persons whose rights were violated had resulting damages paid for by those who caused them harm. Given the difficulties in obtaining compensation through the civil system from errant service men, the decision was made to make the parent government responsible for their actions.²⁸⁹ While this system had as its main purpose a compensation program for victims, it had the collateral benefit of

²⁸⁷. Id. at 136.

²⁸⁸. Hague IV, supra note 147 at Art. 3.

²⁸⁹. Sandoz, supra note 286 at 137.

discouraging violations by creating adverse publicity for offending nations and by causing payments to be made.

Building as it did upon already existing customary international law protecting non-combatants, the GC implicitly recognized the availability of reparations as an enforcement mechanism for law of armed conflict violations. The GC therefore sought to strengthen the already existing reparations mechanism. Traditionally under international law, persons wronged by a foreign state could only seek redress through their own national government, which would present a claim on citizens behalf to the foreign state. Particularly in the context of a citizen victimized by foreign military forces during a conflict, this makes some sense given the fact that the citizen is unlikely to have the means to identify the individual foreign service personnel responsible or pursue a claim in foreign courts.²⁹⁰

In settling such claims, the states involved were free to compromise the claim, even absolving the responsible state of any liability for the wrong.²⁹¹ There is therefore always the danger that a citizen so victimized by another state will have his claim compromised by his own country if it lost the conflict by absolving the other state of responsibility for violations of the laws of armed conflict committed upon the claimant. This would eliminate the chance that reparations

²⁹⁰. Id. at 142.

²⁹¹. Murphy, supra note 263 at 33.

would be paid and passed on to the victim.

To prevent this, the GC provides that parties to the Convention may not absolve themselves or other states from liability arising from grave breaches of the Convention.²⁹²

In addition to the use of reparations under the international law of armed conflict, reparations are also available for violations of international environmental law since they are a normal remedy available when a state breaches a treaty obligation owed to another state and causes injury thereby.²⁹³ It would therefore be appropriate for a state which is a party to the Kuwait Regional Convention to demand reparations from Iraq for violating its duties under that Convention.

b. Reparations Mechanism Provided by the Security Council

In the months which followed the invasion of Kuwait, the Security Council of the United Nations repeatedly reminded Iraq of its obligations under the GC as well as international law generally. In increasingly blunt terms, the Security Council, through resolutions, outlined Iraq's responsibilities and laid the groundwork for enforcing international law

²⁹². GC, supra note 148 at Art. 148.

²⁹³. Chorzow Factory (Jurisdiction) Case, 1927 P.C.I.J., (ser. A.) No.9 (July 26) at 21.

through reparations.²⁹⁴ Among these historic resolutions

²⁹⁴ The pertinent portions of the Security Council Resolutions were as follows:

- "...Deeply Concerned for the safety and well being of third state nationals in Iraq and Kuwait,

Recalling the obligations of Iraq in this regard under international law..."

S.C. Res. 664, Aug. 18, 1990, (S/RES/664 (1990).

- "...Deeply Concerned that Iraq has failed to comply with its obligations under Security Council resolution 664 (1990) in respect of the safety and well-being of third state nationals, and reaffirming that Iraq retains full responsibility in this regard under international humanitarian law including, where applicable, the Fourth Geneva Convention..."

S.C. Res. 666, Sept. 13, 1990, (S/RES/666 (1990).

- "...Condemning Further the treatment by Iraqi forces of Kuwaiti nationals, including measures to force them to leave their own country and mistreatment of persons and property in Kuwait in violation of international law..."

S.C. Res. 670, Sept. 25, 1990, (S/RES/670 (1990).

- "...Condemning the actions by the Iraqi authorities and occupying forces to take third-state nationals hostage and to mistreat and oppress Kuwaiti and third-state nationals, and to other actions reported to the Council such as the destruction of Kuwaiti demographic records, forced departure of Kuwaitis and relocation of population in Kuwait and the unlawful destruction and seizure of public and private property in Kuwait including hospital supplies and equipment, in violation of the decisions of this Council, the Charter of the United Nations, the Fourth Geneva Convention, the Vienna Convention on Diplomatic and Consular Relations and international law...

Reaffirming that the Fourth Geneva Convention applies to Kuwait and that as a High Contracting Party to the Convention, Iraq is bound to comply fully with all its terms and in particular is liable under the Convention in respect of the grave breaches committed by it, as are individuals who commit or order the commission of grave breaches,...

1. Demands that Iraqi authorities and occupying forces immediately cease and desist from ... actions such as those reported to the Council and described above, violating... the Fourth Geneva Convention... and international law;

2. Invites states to collect substantiated information in their possession or submitted to them on the grave breaches by Iraq as per paragraph 1 above and to make

were specific references to Iraq's obligations not to unlawfully destroy public property in Kuwait and its liability for any loss, damage or injury resulting from the invasion.²⁹⁵

Following the suspension of offensive military operations against Iraq by Coalition forces, the Security Council demanded, among other things, that Iraq "accept in principle its liability under international law for any loss, damage or injury arising in regard to Kuwait and third states, and their nationals and corporations, as a result of the invasion and illegal occupation of Kuwait by Iraq;..."²⁹⁶ Having previously agreed to comply fully with the Council's prior resolutions, and fearful of a total occupation of Iraq by poised Coalition forces, Iraq quickly agreed.

One month later, the Security Council followed-up and announced the creation of an unprecedented international system for indemnifying the victims of Iraq's international

this information available to the Council;...

8. Reminds Iraq that under international law it is liable for any loss, damage or injury arising in regard to Kuwait and third states, and their nationals and corporations, as a result of the invasion and illegal occupation of Kuwait by Iraq;

9. Invites states to collect relevant information regarding their claims, and those of their nationals and corporations, for restitution or financial compensation by Iraq with a view to such arrangements as may be established in accordance with international law;..."

S.C. Res. 674, Oct. 29, 1990, (S/RES/674(1990)).

²⁹⁵. Id., S.C. Res. 674.

²⁹⁶. S.C. Res. 686, Mar. 2. 1991, (S/RES/686(1991)).

law violations, including the laws of armed conflict and international environmental law. The Council began by making its broadest and most explicit statement up to that point concerning the extent of Iraqi liability to pay reparations:

The Security Council,...

16. Reaffirms that Iraq, without prejudice to the debts and obligations of Iraq arising prior to 2 August 1990, which will be addressed through the normal mechanisms, is liable under international law for any direct loss, damage, including environmental damage and depletion of natural resources, or injury to foreign governments, nationals and corporations, as a result of Iraq's unlawful ²⁹⁷ invasion and occupation of Kuwait;...

Thus the Council explicitly included direct damage done to the environment and the depletion of natural resources among the injuries for which Iraq was to be held accountable under international law. The Council then announced the creation of a Fund (later to be named the United Nations Compensation Fund) from which the payment of claims for the direct loss and damage outlined in paragraph 16 was to be made.²⁹⁸ The Council also announced that funds for payment of claims were to come from Iraq based upon a percentage of the value of the exports of its petroleum products.²⁹⁹ The Council concluded by requiring the Secretary-General to provide recommendations on the administering of the Fund, including a mechanism for

²⁹⁷. S.C. Res. 687, Apr. 3, 1991, (S/RES/687(1991)).

²⁹⁸. Id. at paragraph 19.

²⁹⁹. Id.

determining an appropriate percentage of oil-related revenues.

The Secretary-General subsequently recommended that the Fund be administered by a three-tiered Commission consisting of: a policy-making Governing Council; a functional level consisting of various commissioners expert in fields such as finance, law and environmental damage assessment; and a support level called the secretariat.³⁰⁰ With regard to the functional aspects of processing claims, the Secretary-General recommended that each nation should consolidate its own claims along with the claims of its affected citizens and corporations for presentation to the Commission.³⁰¹ It was further recommended that the Governing Council decide all issues with one exception by a majority vote of at least nine members.³⁰²

The Security Council subsequently implemented the Secretary-General's recommendations regarding the structure for managing the Fund. It was left to the Governing Council to recommend a mechanism for determining the percentage of oil-related exports to be contributed by Iraq and to determine

³⁰⁰. Secretary General's report of 2 May 1991, (S/22559) at 2,3. (The Governing Council would be composed of one representative from each of the current 15 members of the Security Council at any given time. The Commissioners would be nominated by the Secretary-General and appointed by the Governing Council.)

³⁰¹. Id.

³⁰². Id. at 4. (The exception would be with regard to the method of ensuring that payments are made to the Fund, which would be decided by consensus.)

the process for assessing and paying claims.³⁰³ The Security Council also specified that if Iraq failed to make payments to the Fund in accordance with the directions of the Governing Council, then the prohibition on the importing of Iraqi petroleum and petroleum products would be retained or reimposed as the case may be.³⁰⁴

c. Reparations for the Sea Island Terminal Spill and Oil Well Fires

Having decided that Iraq is liable for "any direct loss, damage, including environmental damage and depletion of natural resources, or injury to foreign governments, nationals and corporations..." caused as a result of the invasion,³⁰⁵ the Security Council has explicitly included environmental and natural resources costs such as those resulting from the Sea Island Terminal oil spill and the Kuwaiti oil fires among those which Iraq will be expected to pay as part of its reparations. How much Iraq ultimately will have to pay is unclear, but it is expected to be the highest amount of reparations ever levied.³⁰⁶

³⁰³. S.C. Res. 692, May 29, 1991, (S/RES/692(1991)).

³⁰⁴. *Id.*

³⁰⁵. S.C. Res. 687, para. 16, infra at 122.

³⁰⁶. Rowe, U.N. Studying War-Damage Assessment, Wash. Post, May 14, 1991 at A12.

Much will depend on the political will of key choke-point states such as Saudi Arabia, Turkey, and Syria through which Iraqi oil pipelines travel, and the U.S., which largely maintains the naval interdiction of Iraq's oil tanker route. As long as these countries can threaten to cut-off Iraq's access to oil markets, Iraq will have no choice but to accept the U.N. reparations scheme. The amount Iraq will have to pay for costs from the oil spill and oil well fires will also depend on what costs the Fund's Governing Council interprets as resulting from loss, damage, or injury arising from these actions.

In order of decreasing connection, costs resulting from the Sea Island Terminal oil spill and oil well fires can be categorized as follows:

Clean-Up Costs:

The huge oil slick from Sea Island Terminal, mixed with several other small spill sources, clogged approximately 335 miles of Kuwaiti and Saudi Arabian beaches and coastal marshes.³⁰⁷ About half of the oil from the original oil spill is believed to have evaporated.³⁰⁸ Priority has gone

³⁰⁷ . Kuwaiti Fire Health Risk Seen Lower Than Feared, Wash. Post, June 11, 1991 at A10.

³⁰⁸ . Efron, Kuwait's Oil Nightmare Slowly Abates, Wash. Post, June 8, 1991 at A16.

From an environmentalist's viewpoint, to say that the oil has evaporated does not mean that it has disappeared. Since the world ecosystem is a closed system, the oil became air pollution, which will in turn eventually return to again pollute the land and water.

to removing oil from the waters of the Gulf, to prevent its fouling coastal areas farther south.³⁰⁹ While environmental officials admit that much of the shoreline fouled by oil will never be cleaned³¹⁰, to the extent that such efforts are made, costs in removing the oil from the Gulf and scrubbing the shoreline are recoverable from the Fund. As of June, 1991, between 3,000 and 6,000 barrels of oil continued to pour into the Gulf each day from at least eight locations in Kuwait and Iraq.³¹¹ The Commission will face the daunting task of determining responsibility for the leaks in assessing recovery costs to Iraq.

The extinguishing of Kuwait's oil well fires alone is estimated to have cost \$1.5 billion.³¹²

Depletion of Natural Resources:

The oil well fires have been consuming up to 6 million barrels of oil a day, an amount equal to a third of U.S. daily

³⁰⁹. Booth, War's Oil Spill Still Sullies Gulf Shore, Wash. Post, Apr. 8, 1991 at A13.

As of June, 1991, 1.5 million barrels of oil had been reclaimed from the Gulf, and an additional 2 million barrels of oil/water mixture was removed and was awaiting separation. This is the largest amount of oil ever recovered from an oil spill. Efron, supra note 308 at A16.

³¹⁰. Booth, supra note 309 at A13. (Oil washing up on the beach has turned into asphalt in the baking sun. Flushing marshes and mangrove stands has not even been attempted.)

³¹¹. Efron, supra note 308.

³¹². Summary of World Broadcasts/The Morning Report, British Broadcasting Corporation, Nov. 7, 1991, NEXIS, currntfile: Kuwait oil well fires.

oil consumption.³¹³ At \$20 a barrel market price, Kuwait is losing \$120 million a day in oil revenue. Additionally, the uncontrolled fires have caused oil to be released from Kuwaiti natural underground reservoirs at a rate that has caused permanent damage to them. As a result, future Kuwait oil production costs are likely to be higher and Kuwait's estimated 100 year supply of oil may be reduced 10 to 20 years.³¹⁴ If this were not enough, Iraqi attempts to sabotage 80 of the wells failed to ignite them but did succeed in creating geysers of oil that have spread oil over thousands of acres of desert.³¹⁵ While killing plants, this oil is also threatening to seep into desert aquifers, polluting an important source of water in Kuwait.³¹⁶ This damage would have even longer term and more serious effects on Kuwait's populace than the loss of oil income.

³¹³. Arundel, EPA Chief Cites Kuwaiti Progress Fighting Well Fires, Oil Spills, Wash. Post, June 5, 1991 at A28.

³¹⁴. Booth, Kuwait's Oil Woes May Be Permanent. Wash. Post, May 2, 1991 at A1. (Oil is normally forced from the Kuwaiti reservoirs by natural water pressure from surrounding sandstone formations. The billowing white smoke from some wells signals that the unusually high rate of extraction of oil caused by the fires is causing water to seep into the wells themselves and fouling them.)

But see Booth, supra note 31 at A3. (U.S. government scientists say that white smoke is not caused by water seepage but something else. Environmental lobbying groups have in turn charged government scientists with downplaying the serious nature of the ecological damage.)

³¹⁵. Pomfret, First Kuwaiti Well Capped; '799 To Go', Wash. Post, Mar. 27, 1991 at A26.

³¹⁶. Booth, supra note 234 at A12.

The oil from the Sea Island Terminal spill which did not evaporate or collect along the shores has sunk to the Gulf floor where it may smother coral reefs and sea grass beds which act as nurseries for shrimp, oysters and other fish.³¹⁷ The oil has also covered mud flats and salt marshes which also provide fish nurseries and feeding grounds for migratory birds. Scientists are concerned that the oil cover could prevent birds from using them during their spring migration.³¹⁸ This damage will diminish the harvest of valuable fish, shrimp and shellfish from the Gulf, causing economic loss for Gulf fishermen in what was once a multi-million dollar industry.³¹⁹ The Commission will have a challenging time estimating the loss in production attributable to Iraq caused spills over many years.

Human Health Costs:

The oil spill into the Gulf and the potential polluting of the aquifers both threaten the safety of Kuwait's water supply. Since desalinization plants do not remove organic materials such as crude oil from the water, it is passed along to the consumer.³²⁰ Unfortunately, in order to kill harmful bacteria, chlorine is also added. The result is the intake of chlorinated hydrocarbons, a substance the U.S. considers

³¹⁷. Infra note 11.

³¹⁸. Booth, supra note 309 at A13.

³¹⁹. Infra at pg. 6.

³²⁰. SORE, Dr. Alan Moghissi supra note 192.

carcinogenic and has spent heavily to reduce through the Super Fund program.³²¹

Even if temperature inversions do not produce the feared acute health problems,³²² there remains concern about the chronic health effects from breathing air polluted by the oil well fires. Researchers are studying the tiny droplets of oil falling over parts of Kuwait and Saudi Arabia for the presence of polycyclic aromatic hydrocarbons (PAHs), some of which are known or suspected human carcinogens.³²³ The problem for the Commission in assessing reparations for such chronic adverse health effects is that it may take decades for the diseases to manifest themselves. It is also often impossible to distinguish cancer caused by oil well fires and oil spills from that caused by normal petroleum processing operations or even personal health habits such as smoking cigarettes. For this reason, the Commission may decide the effects are too indirect and speculative to be worth of compensation.

d. Issues Yet To Be Resolved

There are hundreds of details yet to be worked out concerning the operation of the reparation fund. Among them are two central issues which deserve attention early on.

³²¹. Id.

³²². Efron, supra note 308 at A16.

³²³. Booth, supra note 234 at A12.

1. Defining Direct Damage or Loss

The Governing Council will first have to provide guidance on what it considers to be direct damage or loss arising from the invasion of Kuwait. In the context of the oil spill and oil well fires alone, this raises a host of questions. Will clean-up costs such as those related to oil skimming and wetlands restoration be included? May fishermen claim compensation for the long-term losses they may suffer in shrimp and fish harvests as a result of the damage done to the sea grass bed nurseries? Can governments claim compensation for the loss of wildlife within their territory and territorial waters as a diminishment of the quality of life of their citizens? Can Kuwait claim compensation for increased chronic health risks associated with the increased air pollution from burning oil wells when diseases may not manifest themselves for decades and cannot be differentiated from similar diseases caused by personal life choices and other factors not related to the oil well fires? These are potentially vast sources of liability for Iraq and the answers given by the Governing Council will set an important precedent for international environmental damage claims.

In answering these difficult questions, the Governing Council should be influenced by certain limitations of liability already in place in international environmental law

with regard to oil spills from tankers. These limitations are contained in the International Convention on Civil Liability for Oil Pollution Damage³²⁴ and the 1971 Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage.³²⁵

A key provision in each of these conventions is that the compensation provided covers only oil pollution damage occurring on the territory or within the territorial sea of

³²⁴. International Convention on Civil Liability for Oil Pollution Damage, Nov. 29, 1969, 973 U.N.T.S. O [Hereinafter Civil Liability Convention].

This Convention makes oil tanker owners strictly liable for loss or damage from oil pollution including costs related to minimizing further damage from spills. However, owner liability is limited to 2,000 francs for each ton of the ship's tonnage up to 210 million francs per vessel. Nonetheless, oil spills caused by the fault or privity of the owner have no such liability limitations. Further, an owner may avoid all liability for a spill if he or she can show that the pollution damage resulted from an act of war.

The Civil Liability Convention entered into force in 1975 and had 60 parties to it by May, 1989. Iraq is not a party to the Convention.

³²⁵. 1971 Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971 U.N.J.Y.B. 103 reprinted in International Environment Reporter Reference File, at 21:1701 [Hereinafter International Fund Convention].

This Convention provides supplemental compensation to oil spill victims in the event payments under the Civil Liability Convention prove inadequate to cover all damage costs. Payments are made from a central fund into which oil cargo-owners make mandatory contributions. There is a maximum payment per incident of 450 million gold (Poincare') francs inclusive of the amount already paid by the ship owner. The Convention does not cover damage resulting from acts of war.

The International Fund Convention entered into force in 1978 and as of June, 1989, there were 41 parties to it. Iraq is not a party to the Convention.

the parties.³²⁶ Thus, damage done on the high seas, to fish stocks, shellfish or their nurseries for example, would not be compensated for under the Conventions. Inasmuch as such resources are located in a world "commons" area and therefore are not owned by any nation, corporation or individual, this limitation would be consistent with the Hague IV Regulations and GC provisions which only prohibit destruction without military necessity of property owned either publicly or privately.

That international environmental law has not yet developed to include liability for damage in world "commons" areas is also evident from the failure of states to follow up on the call in Article X of the London Dumping Convention³²⁷ and Principle 21³²⁸ to take responsibility for pollution damage caused in world commons areas such as the high seas. In addition, there is also the practical difficulties involved in assessing the value of lost wildlife and wildlife habitat and determining the extent of their injury. Given the lack of precedent for assessing liability for damage in commons areas, the Governing Council is unlikely to compensate for damage outside of the 12 mile territorial sea limits of the Gulf.

³²⁶. Civil Liability Convention, supra note 324 at Art.II. International Fund Convention, Id. at Art. 3.

³²⁷. Discussed infra at note 144 and at page 37.

³²⁸. Infra note 143 and accompanying text.

2. The Claims Process As Exclusive Remedy?

Also of tremendous significance is whether or not the Governing Council should or even could make the Fund claims process an exclusive remedy for victims seeking compensation for damage done as a result of the invasion. With the growing world trend in permitting civil suits in domestic courts against foreign sovereigns for wrongs under domestic and even international law, there is a danger that the Fund process could be eclipsed by contradictory or duplicate decisions in domestic courts.³²⁹ In his report, the Secretary-General was

³²⁹ Within the U.S., the opportunity for obtaining such judgments in domestic courts was eliminated by the Supreme Court's interpretation of the Foreign Sovereign Immunities Act of 1976 (FSIA), 28 U.S.C. 1330 et. seq. in the case of Argentine Republic v. Amerada Hess Shipping Corp., 109 S.C. 683, 57 U.S.L.W. 4121, 28 Int'l Leg. Mat'l 382 (1989). The Court held that Congress intended the FSIA to be the sole basis for obtaining jurisdiction over a foreign state in U.S. federal and state courts. It then went on to review the exceptions to immunity within the FSIA and concluded that none applied to an attack by the armed forces of a foreign country upon a neutral vessel outside the territorial waters of the U.S.

An interesting argument might be made concerning the qualifying language in FSIA sec. 1604 which makes immunity from jurisdiction in U.S. courts "subject to existing international agreements." The suggestion would be that GC Art. 148 does not permit parties to absolve other parties from liability for grave breaches and that the granting of immunity from suit would do just that. However, the Court, responding to similar arguments in the Amerada Hess case, noted legislative history behind FSIA 1604 as requiring an express conflict between the international agreement and immunity. The Court seemed to require that the international agreement must do more than just set forth substantive rules of conduct and go on to create a private right of action. It also seemed to require that the international agreement contain an explicit waiver of immunity to suit in U.S. courts. GC Art. 148 falls short of these requirements. In addition, Art. 148

of the opinion that the Security Council did not intend to give the Commission exclusive competence to consider claims arising from the invasion.³³⁰ Nonetheless, he did recommend that the Governing Council establish guidelines and mechanisms to ensure that the aggregate of compensation awarded by the Commission and a national court does not exceed the amount of the loss.³³¹

The availability of other avenues to redress claims against Iraq will depend on the domestic laws of the countries to which the victims belong. In the U.S., for example, the U.S. Congress could provide for an exception under the FSIA which would allow for such suits in U.S. courts. The Congress may also do what it has done following several other armed conflicts, and establish a U.S. tribunal such as the Foreign Claims Settlement Commission for determining appropriate compensation for U.S. citizens suffering losses from the war. Claims could be paid from Iraqi assets frozen in the U.S. or

contemplated liability as established in claims made between states only. See Pictet, supra note 257 at 603.

It is one thing for a state to agree to the principle that it will not absolve itself or allow another state to absolve it of responsibility for grave breaches. It is another thing entirely to suggest that a state doing so also is waiving its immunity from the jurisdiction of the domestic courts of foreign governments, allowing them to decide whether a breach occurred and setting the compensation for it.

³³⁰. Secretary-General's Report of 2 May 1991, supra note 300 at 8.

³³¹. Id.

even from appropriated funds.³³² Tribunals for resolving claims could even be established in a bilateral agreement between Iraq and individual nations.

Any plans for the U.S. to settle reparations with Iraq on a bilateral basis or through litigation in U.S. domestic courts would be met with a large amount of negative international reaction. Already the subject of much suspicion and envy, the U.S. would be perceived as grabbing all of the spoils of the victory, leaving victims from other, less powerful countries, to fend for themselves. In addition, faced with the chaos of conflicting claims from dozens of countries, and a break-up of the United Nations Coalition on the issue, Iraq may refuse to pay any claims, leaving the international community with no precedent at all for the enforcement of international environmental law and the law of armed conflict.

e. Conclusion Regarding the Reparations Option

Although there is an ample legal basis for insisting on reparations for Iraq's violations of international law, some critics argue against their use on political grounds. They point to the example of World War I after which the victorious

³³². For a discussion of the history of the foreign claims process in the United States and its possible application to the 1991 Persian Gulf War, see Glod, Preparing the Bills for War's Devastation, Legal Times, Mar. 11, 1991 at 26.

Allies saddled Germany with large reparation debts, thus fueling German resentment and helping to bring on World War II.³³³ There is no doubt that Iraq faces daunting economic challenges as the result of the war. Already facing a pre-war debt of approximately \$80 billion³³⁴, Iraq is now estimated to need \$100 billion to repair its own war damage.³³⁵ Iraq's capacity to generate oil revenue was itself damaged in the war, with one estimate suggesting a diminished output resulting in annual oil income of only \$17.5 billion.³³⁶ The Security Council has also added to Iraq's international financial obligations by voting to require it to pay the cost of eliminating its arsenal of nuclear materials and chemical and biological weapons at an estimated cost of \$800 million.³³⁷

Critics add that it would be unfair to punish an entire nation for the acts of a dictator whom they did not

³³³. Hunter, Reparations Would Only Provoke Lust For Revenge, L.A. Daily J., Mar. 26, 1991 at 6.

³³⁴. Mufson, Iraq's Ability to Pay Reparations Doubted, Wash. Post, Mar. 1, 1991 at A29.

³³⁵. Hunter, supra note 333.

³³⁶. Mufson, supra note 334.

The U.N. Secretary-General has estimated that Iraq will be able to earn \$21 billion in gross oil receipts by 1993. See Goshko, U.S. Seeks Fast Payment From Iraq, Wash. Post, June 4, 1991 at A10.

³³⁷. Smith, U.N. Tells Iraq to Pay Cost of Disarmament, Wash. Post, June 18, 1991.

choose.³³⁸ Of course, the same argument could have been used to justify no punishment for Germany and Japan for the horrors committed by them against POWs and civilians during World War II. In addition, to fail to hold nations responsible for international law violations based on their form of government would create a large class of judgment-proof nations with aggressive dictatorships which would somehow be less responsible for their international wrongs than other nations. Given the number of non-democratic states at present, this exception would easily swallow the rule.

The challenge will be to determine a percentage of oil-based export revenue that will permit Iraq a modest opportunity to rebuild and develop while offering victims substantial if not complete compensation within a reasonably short period of time. At the same time, it is important not to muddle the reparations/economic sanctions mechanism in geopolitics. The U.S. has taken the position that sanctions against Iraq will remain in place as long as Saddam remains in power.³³⁹ This position gives Iraq no incentive to begin payments to the Fund. The U.S. is therefore risking losing an important international law precedent and beneficial compensation program to pursue a foreign policy goal it has failed to achieve through even the extreme means of armed conflict.

³³⁸. Hunter, supra note 333.

³³⁹. Goshko, supra note 336.

Taking this dubious strategy one step further, a legal theorist has argued for the imposition of punitive reparations to remain in place until Saddam is overthrown.³⁴⁰ While such a scheme is very attractive on an emotional level, there is every indication from the events of the past year that the present Iraqi government is firmly in power and will not be dislodged short of armed foreign occupation of all of Iraq.

The reparations option is the most practical way to affirm international environmental law and the law of armed conflict. The Security Council has in place an historic mechanism which can both compensate the victims of Iraq's aggression and serve as a powerful precedent for applying existing international law. Given the realities, the cause of international law would best be served by achieving the reasonable goal of obtaining reparations specifically identified as compensation for Iraq's illegal activities. Insisting upon more complex solutions of the legal issues or attempting to combine difficult political goals risks the substantial chance of ending up with no precedent at all.

XIII. Does International Law Need Further Development?

Even as the six week war was being waged against Iraq, calls for new international laws to protect the environment were being issued. Prime Minister Brian Mulroney of Canada

³⁴⁰. Green, supra note 274.

called for consideration of an international conference of legal experts to discuss "ways of strengthening international law to prevent the environment from being used as a weapon of war or an instrument of extortion".³⁴¹ Environmental lobbying groups quickly followed. Greenpeace announced the organization of a conference of lawyers and military experts to discuss the elements of a "Fifth Geneva Convention... to outlaw the use of the environment as a target of war".³⁴² Even relatively obscure organizations proposed their own frameworks for new treaties to protect the environment (e.g. the Wildlife Information Center, Inc. proposed a Treaty on Environmental Terrorism and Ecocide).³⁴³ The following paragraphs discuss the merits of existing treaties attempting to provide such protection and conclude with a discussion of the utility of expanding the law of armed conflict further in this area.

³⁴¹. Speech by Prime Minister Brian Mulroney of Canada (February 8, 1991).

³⁴². New York Times, Mar. 11, 1991 at A9.

³⁴³. Press Release (Jan. 27, 1991) Wildlife Information Center, Inc. (Available from WIC: 629 Green St., Allentown, PA 18102.) (W.I.C. suggested that the deliberate extermination or even endangerment of animal and plant species and the deliberate creation of major oil spills for military purposes should be prohibited.)

A. Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection³⁴⁴ of Victims of International Armed Conflicts

The International Committee of the Red Cross presented two draft Protocols to the widely adopted 1949 Geneva Conventions at a diplomatic conference in 1974. These Protocols were intended to update and expand the 1949 Geneva Conventions in light of new weapons and tactics. They also attempted to address problems which had developed in applying the laws of armed conflict to hostilities during the post-colonial period. Of concern in this paper is Protocol I, which provides supplemental rules for both protecting non-combatants and for limiting means and methods employed by military forces during international armed conflicts. Protocol I entered into force in 1978 and as of 1990 had 92 parties to it.³⁴⁵

Negotiated over the course of four years in the mid-1970's, the Protocol reflected the international antagonisms which existed during this period between East and West (the then existing Soviet Bloc and the western democracies) as well

³⁴⁴. Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflict (Protocol I), Dec. 12, 1977, 1125 U.N.T.S. 3 [Hereinafter Protocol I].

³⁴⁵. Kuwait became a party in 1985 although Iraq has neither signed nor become a party to the Protocol. The Byelorussian SSR and the U.S.S.R., China, Syria and Saudi Arabia are parties. The U.S., Great Britain, France and the German Federal Republic are not, although the U.S., the U.K. and the G.F.R. have signed the Protocol.

as between North and South (the industrialized, modern nations and the struggling third world countries, many of which had recently been granted independence).³⁴⁶ In many important instance, the resulting Protocol resolved the differences between the parties through use of ambiguous and unworkable provisions and standards.³⁴⁷ Although the United States signed Protocol I in 1977 during President Carter's administration, as a result of these deficiencies, neither President Reagan nor President Bush have chosen to submit the Protocol to the Senate for ratification. Both the Joint Chiefs of Staff and the Defense Department have recommended against ratification.³⁴⁸ The fact that several other major western military powers have refrained from ratifying Protocol I is an indication that other states share U.S. concerns about

³⁴⁶. For an overview of the negotiating process involved, see M. Bothe, K. Partsch and W. Solf, New Rules for Victims of Armed Conflict: Commentary on the Two 1977 Protocols Additional to the Geneva Conventions of 1949 pp. 2-10 (1982) [Hereinafter cited as Bothe]. See also Schmidt, The Protection of Victims of International Armed Conflicts: Protocol I Additional to the Geneva Conventions, 24 A.F.L. Rev. 205-209 (1984). See also H. Levie, 3 Protection of War Victims: Protocol I to the 1949 Geneva Conventions 259-277.

³⁴⁷. See Roberts, The New Rules for Waging War: The Case Against Ratification of Additional Protocol I, 26 Va. J. Int'l L. 122-123, 166-170 (1985). See also Forsythe, Three Sessions of Legislating Humanitarian Law: Forward March, Retreat, or Parade Rest?, 11 Int'l L. 132-134 (1977). But see Aldrich, Progressive Development of the Laws of War: A Reply to Criticisms of the 1977 Geneva Protocol I 26 Va. J. Int'l L. 694 (1986).

³⁴⁸. See Geneva Convention Change Questioned, Wash. Post, July 23, 1985 at A3. See also Gelb, War Law Pact Faces Objection of Joint Chiefs, N.Y. Times, July 22, 1985 at A1.

its shortcomings.

Unfortunately, the provisions providing protection for the environment were among those in the Protocol containing vague and unworkable language. Two related provisions are relevant. Article 35, paragraph 3 states: "It is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment."³⁴⁹ More expansive but having essentially the same meaning is Article 55:

1. Care should be taken in warfare to protect the natural environment against widespread, long-term and severe damage. This protection includes a prohibition of the use of methods or means of warfare which are intended or may be expected to cause such damage to the natural environment and thereby prejudice the health or survival of the population.
2. Attacks against the natural environment³⁵⁰ by way of reprisals are prohibited.

These parallel provisions reflect the different philosophical approaches of the delegates drafting the Protocol over the underlying reason for protecting the environment. The language of Article 35:3, located in that portion of the Protocol dealing with methods and means of warfare, represents the concerns of those who felt that the protection of the environment was an end in itself. Placed in the section providing protections for civilians and civilian objects,

³⁴⁹. Protocol I, supra note 344 at Art. 35.

³⁵⁰. Id. at Art. 55.

Article 55 emphasizes the concerns of those delegates who saw protecting the environment as a means of ensuring the survival of civilians who were dependent upon it.³⁵¹

Although several provisions of the Protocol simply codify existing customary law, the environmental protection provisions are new law. Unlike the ENMOD Convention, which only prohibits the deliberate use of the earth's natural forces as a weapon against another party, Protocol I prohibits any mean or method employed in combat which results in significant enough environmental damage to meet the "widespread", "long-term" and "severe" tests. The prohibition extends not only to methods or means of warfare which are intended to cause significant damage to the environment, but also to any means or method which "may be expected" to cause such damage.

This is a considerable expansion of liability for warriors attempting to carry out effective but lawful attacks upon the enemy, and imposes an unfair burden upon them in predicting the collateral effects of a given attack. Submarine commanders launching torpedo attacks or surface vessel commanders launching cruise missile attacks upon enemy merchant vessels based upon over-the-horizon targeting would risk having their actions labeled unlawful in the event the merchantman turned out to be a bulk-oil or other hazardous material carrier and the resulting spill caused significant

³⁵¹ . Bothe, supra note 346 at 345.

ecological damage in coastal areas.³⁵²

Similarly unfair liability could be imposed upon attack pilots or even ground crews providing rocket or artillery fire support should they hit storage tanks containing hazardous materials. If the resulting spill were to reach an aquifer acting as the sole source of water for the area's population, the environmental damage would be severe. It would be unreasonable to require combatants to be this prescient and to risk criminal or administrative sanction should their action be labeled unlawful.³⁵³ An additional effect of such expanded liability would be a potentially vast expansion of a belligerent state's liability for environmental clean-up costs engendered from attacks labeled unlawful under these provisions.

At the heart of the ambiguity of the environmental protection articles in Protocol I are the terms "widespread", "long-term" and "severe" damage to the natural environment. Remarkably, the terms are not defined in either the Convention itself or in an attached Understanding thereto. While the ENMOD Convention used almost the same terms (though in the disjunctive rather than the conjunctive), the accompanying

³⁵². Roberts, supra note 347 at 148.

³⁵³. Although violation of environmental prohibitions is not listed as a grave breach in Protocol I and hence prosecutable by any party to the Protocol, it may still be considered a war crime by a victorious enemy or even one's own armed force. See Protocol I, supra note 344 at Art. 85. See also Schmidt, supra note 346 at 244.

Understanding explicitly limited the use of the definitions supplied to the ENMOD Convention itself.³⁵⁴ It is probably telling that the report of the drafting committee working on these Protocol I provisions indicated that while each term was extensively discussed, it chose to explain only the term "long-term".

The committee did go on to report that "it appeared to be a widely shared assumption that battlefield damage incidental to conventional warfare would not normally be proscribed by this provision."³⁵⁵ Additionally, the Chairman of the committee sub-group which was responsible for the initial approval of this language stated that "Acts of warfare which cause short-term damage to the natural environment, such as artillery bombardment, are not intended to be prohibited by the Article."³⁵⁶ The sub-group Chairman went on to state that the damage contemplated by the Articles must be such as to disturb the stability of the ecosystem "for a significant period of time perhaps for ten years or more. However, it was impossible to say with certainty what period of time might be

³⁵⁴. ENMOD is discussed infra at 89. Article I of the ENMOD convention prohibits "Use of environmental modification techniques having widespread, long-lasting or severe effects...". See ENMOD Convention, supra note 225 at Art. I.

³⁵⁵. Bothe, supra note 346 at 346.

³⁵⁶. Report of the Chairman of the Group "Biotope", Committee III, Mar. 11, 1975, CDDH/III/GT/35 reprinted in Levie, note 346 at Vol. 2, 267.

involved..."³⁵⁷

Given the vagueness of the defining terms and the uncertain nature of the underlying preparatory work on the Protocol, it is not surprising that commentators have referred to the environmental protection articles as having little effect on military operations. One author opined that the Articles are only hortatory, adopting only an unenforceable goal of environmental protection.³⁵⁸ Taking a somewhat similar approach, others have opined hopefully that the Articles were "primarily directed to high level policy decision makers", affecting only "unconventional means of warfare such as the massive use of herbicides or chemical agents."³⁵⁹

Yet, if the Articles are only hortatory, why were the terms "prohibit" and "prohibition" used? And if the purpose was only to prevent national leaders from directing the use of unconventional means of warfare, why doesn't the Protocol then simply say that? Since all warfare can't help but damage the environment to some extent, service men and women need to know what level of environmental damage and through what means and methods is it prohibited.

³⁵⁷ . Id.

³⁵⁸ . Almond, supra note 236 at 130.

³⁵⁹ . Bothe, supra note 346 at 348. (The authors, who were delegates from the United States and the Federal Republic of Germany, concluded that the Articles would not impose any significant limitation on combatants waging conventional warfare.)

The ambiguous nature of Protocol I's environmental provisions has two potential effects. First, it leaves military personnel vulnerable to prosecution or adverse administrative action by authorities free to interpret the terms as they see fit. Similarly, it leaves party states vulnerable to propaganda and claims for compensation from enemy states and their people based on a claim that the Protocol was violated and the state was therefore legally responsible.³⁶⁰ Second, given that nations at war are already not inclined to impose legal limits upon themselves in defeating an enemy, they will quickly ignore any such limit which is not clearly defined.³⁶¹ Such treaty provisions do not promote respect for or compliance with international law and treaties containing such provisions are better left unratified than agreed to only on paper and quickly

³⁶⁰. These consequences are all the more likely due to the inclusion in Art. 55 of the prohibition against methods or means of warfare which may be expected to cause widespread, long-term and severe damage to the natural environment.

The Rapporteur to the sub-group responsible for this language observed that the term "may be expected" imports an objective standard of what the state or individual does realize or ought to realize would have the effects described. See Report of the Third Committee on the Work of the Working Group, Committee III, 3 April 1975, CDDH/III/275, XV, 357 reprinted in Levie, supra note 346 at Vol. 3, 270. Inclusion of an objective standard exposes service personnel and belligerent states to liability at the broad discretion of the trier of fact. This is perhaps acceptable in a civil tort system, but it is unfair in the context of an armed conflict in which the participants are at tremendous personal risk and the national stakes are so high.

³⁶¹. Almond, supra note 236 at 130.

forgotten.³⁶²

B. Modifying the ENMOD Convention

The ENMOD Convention is unusual among public international law treaties because of the inclusion of an extensive battery of procedures it establishes for parties wishing to engage in clarifying the objectives, applying the Convention in a given circumstance or even amending the Convention itself. It was as if the negotiating parties themselves recognized that the Treaty as agreed upon could not work, and would have to be changed. It may also be a reflection of their recognition that they were attempting to address a problem which had not yet manifested itself and therefore the Convention needed special flexibility in further

³⁶². In addition to the provisions discussed, Protocol I also contains two further Articles, which while directed at protecting civilian populations, also offer collateral protection to the environment to the extent it would impact on the population. Article 54 prohibits (with certain exceptions) attacks upon or seizure of food and water supplies indispensable to the survival of the civilian population for the specific purpose of denying the population the use of them. Protocol I, *supra* note 344 at Art. 54. Article 56 prohibits (with certain exceptions) attacks upon dams, dikes and nuclear electrical generating stations when the attack may result in severe losses among the civilian population. Protocol I, *supra* note 344 at Art. 56.

Article 54 might arguably apply to the Sea Island Terminal spill if viewed as targeting Saudi desalination plants. However, since this article is not reflective of customary international law and Iraq is not a party to Protocol I, it would not in any case apply.

shaping itself in light of subsequent warfare.³⁶³

The parties first agree to "...consult one another and to co-operate in solving any problems which may arise in relation to the objectives of, or in the application of..." the Convention.³⁶⁴ In addition, any one party has the power to require the Secretary-General of the U.N. (who acts as depository for the Convention) to convene a Consultative Committee of experts which is empowered to find facts or provide expert views on any problem raised by the party.³⁶⁵ Thirdly any party may propose an amendment to the Convention, which will be circulated among all parties.³⁶⁶ The amendment thereafter becomes binding upon acceptance of it by a majority of existing parties. Finally, a majority of parties to the Convention may call a conference to review operation of the Convention "... with a view to ensuring that its purpose and provisions are being realized..."³⁶⁷

On the admittedly hopeful assumption that those states which are parties to ENMOD are sincerely committed to giving

³⁶³. Recent Developments, Environmental Modification, 19 Harv. Int'l L. Rev. 389 (1978). But see Schafer, supra note 247 at 311. (In which the author notes that the ENMOD Convention was produced as a reaction to activities of the U.S. during the Vietnam War and outlines U.S. use of cloud seeding for tactical purposes.)

³⁶⁴. ENMOD Convention, supra note 226 at Art. V.(1).

³⁶⁵. Id. at Art. V(2) and Annex.

³⁶⁶. Id. at Art. VI.

³⁶⁷. Id. at Art. VIII(2).

effect to the treaty, the Iraqi oil release at Sea Island Terminal and perhaps even the oil well fires offer an excellent opportunity for clarifying what are the objectives and application of the treaty. A modest proposal would be to trigger the Consultative Committee of Experts provision. The Committee could then make: 1) findings of fact concerning the cause and extent of environmental damage involved in the oil spill and oil well fires; 2) offer its expert view(s) on whether these constitute environmental modification techniques; 3) if so whether they had widespread, long-lasting or severe effects; and 4) whether they served as a means of destruction, damage or injury. The Committee's report could then serve as a catalyst for any party seeking to amend the Convention to either include or exclude this type of behavior in armed conflict.

C. Can the Law of Armed Conflict Be Expanded Further to Protect the Environment?

Past attempts to expand the international law of armed conflict to include specific protections for the environment have clearly failed. Given current realities, further attempts for the foreseeable future will fail as well. That is because states are not yet willing to make the necessary commitment to reduce trans-boundary pollution.

That lack of commitment is reflected in the current woefully underdeveloped state of international environmental

law. Despite 40 years of developing treaties to restrict marine pollution, the global states have not even attempted to address the source of two-thirds of all marine pollution, which is land sources.³⁶⁸ At the same time, with the exception of CFCs, there has of yet been no attempt to place international emissions restrictions on air pollution. If nations are not willing to restrict their conduct with regard to pollution during times of peace, how can it reasonably be expected that they will be willing to do so when they are at war?

When nations are at war they are unlikely to be receptive to follow restrictions on their conduct imposed by the international legal system. Vital national interests and the very lives of their citizens are at risk.³⁶⁹ In Vietnam, the U.S. chose to trade the significant environmental consequences caused by the massive use of fire power for fewer U.S. combat casualties.³⁷⁰ Is there any doubt that given that choice

³⁶⁸. Some effort has been made in the U.N. Regional Seas treaty program to include land sources, but is unclear whether the states involved are able or willing to actually enforce these restrictions.

³⁶⁹. Almond, supra note 236 at 131,136.

³⁷⁰. P. Rowe, Defense- The Legal Implications 116 (1987). (The author noted that massive firepower was used to clear the ground instead of using troops who would be susceptible to booby traps, ambushes and sniper fire. The U.S. used a number of weapons to do this. The "Daisycutter bomb cleared fire-base helicopter landing areas but also deforested a quarter of a mile radius of land. Chemical herbicides and armored bulldozers called Rome Plows were also used to clear away vegetation.)

again we would do things differently?

In addition, despite the almost universal membership among nations to the 1949 Geneva Conventions, actual observance of the provisions during armed conflicts over the past 40 years has been the exception not the rule. Since states are apparently not yet committed to carrying out provisions designed to prevent unnecessary human suffering, why should it be expected that restrictions designed to prevent environmental suffering will be followed?

Time and energy would be more productively be spent attempting to fashion agreements among nations on the fundamental peacetime issues of population control and consumption control which both drive the global pollution problem.

XIV. Conclusion

Saddam Hussein and his government are so starkly, brutally evil that it is easy to become fixated on fashioning international prohibitions and remedies for his excesses without also considering how they will apply in other contexts. For example, applying Principle 21's extension of liability for damage in commons areas would open up most nations, including the U.S., to liability those nations could not possibly accept politically let alone financially.

A more realistic and ultimately more helpful approach to the development of international law would be if we recognize

that many nations are responsible for trans-boundary pollution. Despite the London Dumping Convention's call for developing procedures to assess liability and settle disputes arising out of ocean dumping, nothing has been done. What should be avoided in responding to Iraq's excesses is holding it to a standard in wartime which the rest of the world community is unwilling to live by even in peacetime.

As the world community justly calls Iraq to task for its violations of international law (including crimes against peace and war crimes), some inclusion of the environmental damage is nonetheless appropriate. Those Gulf states which have had their environment damaged should seek some reasonable amount of reparations tied to an explicit acknowledgement by Iraq that it violated the international laws suggested by this paper. Using the Civil Liability Convention and the International Fund Convention as a guide for the extent of Iraqi liability, the affected states should demand compensation only for damage and containment efforts involving their territory and territorial seas.

Whatever reparations are decided upon by the Commission, they will form an important precedent for both international environmental law and the law of armed conflict. Establishing this precedent will form a basis for the further reasonable development of international law as a whole. Pressing a too ambitious remedy risks the result of having no precedent at all.